THE LANCET.

LECTURES

ON THE

ANATOMY, PHYSIOLOGY, AND DISEASES OF THE EYE.

By MR. LAWRENCE.

London Ophthalmic Infirmary, Moorfields.

Lecture X.

Catarrhal Ophthalmia.—Purulent Ophthalmia.

Gentlemen,

Catarrhal Ophthalmia.—The distinct nature of this affection, and its origin from atmospheric causes or peculiarities, are expressed in the terms *cold* or *blight*, under which it is often popularly mentioned. The expression *ophthalmia mucosa*, designates the increased mucous discharge, which is one of its most striking characters. It is inflammation of the conjunctiva, either of the globe or of the lids, or of both, caused by cold, and it corresponds to catarrhal affections of other mucous membranes, as those of the nose and its sinuses, of the fauces, trachea, and lungs. Catarrhal inflammation frequently goes through all these parts, and commonly so in influenzas.

I do not use the term *cold* in the sense of diminished temperature, but to denote what is commonly called catching, or taking cold, i. e. an injurious influence of cold or moisture applied to the surface, exciting disease either in the body generally, in the part chilled or wetted, or in some distant part of the body. What is the nature of this influence? and how are the effects produced? Every body knows the effect, because every body has experienced it; but the cause, or rather the chain of causes, connecting the external agency of cold or wet on the skin, with the production of morbid phænomena in a distant part, seems equally unknown to the ignorant and the learned. Why should mucous membranes so frequently suffer from this particular influence? Some of them are constantly and freely exposed to the atmosphere, and therefore directly influenced by its changes and peculiarities; such are the Schneiderian membrane, that of the fauces, mouth, trachea, and lungs, and these are accordingly most susceptible to such influences. The mucous membrane of the eye is open externally, yet the whole surface is not so completely and constantly exposed to atmospherical contact as in the membranes just enumerated. Catarrhal inflammation of the eye, therefore, is second in point of frequency. All mucous membranes are connected by continuity of surface with the skin, which probably explains why they suffer so frequently from causes acting merely on the latter. The conjunctiva is a part of the external superficies of our frame, and its connexion with the common integuments is more extensive in proportion to its entire expanse than in the case of any other mucous membrane.

Direct exposure of the part to cold and wet is the most frequent and powerful cause of catarrhal inflammation; exposure to cold winds, especially if combined with fog, rain, snow, or sleet; particular winds are more capable than others of producing this effect, independently of the actual degree of cold; such is the case with East and North winds in this country. In individuals predisposed to the affection, being out in an East wind for a quarter of an hour, or half an hour, will sometimes infallibly bring on an attack. Length of exposure without exercise of the body favours the action of the cause; hence soldiers and sailors on watch, or in camp, very often suffer.—Great changes in the atmosphere from heat to cold, within a short period, bring on catarrhal affections. These vicissitudes are most common in hot climates, where the burning heat of day is succeeded by a chilly night air, often combined with heavy dews, to which persons frequently expose themselves by sleeping in the open air. Officers, being less exposed than soldiers, suffer less under such circumstances. Change of clothing,

and consequent chill of the surface, especially in variable climates; partial exposure to cold air, or, in common language, to drafts of air; and the application of moisture in partial or general wetting, which most effectually chills the body, are other modes of the same unwholesome influence. The application of these causes to the head, or in the immediate neighbourhood of the eye, will most probably bring on catarrhal ophthalmia, when aided by original constitutional peculiarity, or by the general remote causes of disease. Atmospherical influences, of which the nature is entirely unknown, will operate very powerfully on the mucous membranes, producing epidemic influenzas; but in these the conjunctiva merely suffers with the other mucous membranes: we have no epidemic ophthalmiæ extending over large districts, kingdoms, and even continents.

Catarrhal ophthalmia is seated in the conjunctiva, seldom going deeper, and therefore not dangerous; it may be confined to the lids, or may affect the globe also. The Continental writers call the former *Blepharo-conjunctivitis catarrhalis*, and the latter, *Ophthalmo-conjunctivitis catarrhalis*.

Symptoms of Catarrhal Ophthalmia.—Stiffness and smarting, some uneasiness on exposure to light, watering, and external redness usher in the attack. When fully developed, it is characterised by redness, increased *mucous* not *lachrymal* discharge, inconsiderable pain and no intolerance of light.

The redness in catarrhal inflammation is superficial and of bright scarlet colour, forming a striking contrast to the rose or pink tint, which belongs to the inflammation seated in the proper external coat of the eye. The distended vessels are quite superficial, and of scarlet colour; they may be readily pushed aside by moving the lids. The redness is generally irregular, in patches, some fasciculi of vessels being more filled than others; hence the membrane has a mottled appearance; however, in the fullest development of this affection, the whole surface becomes of a bright red. The redness begins at the circumference of the globe, and gradually advances towards the cornea; but in the commencement it is confined to the palpebral conjunctiva, or to the angle of reflection. Sometimes, besides the redness resulting from vascular congestion, especially if the inflammation be severe, you may see red patches in the conjunctiva; these are spots of ecchymosis, small quantities of extravasated blood, and such an appearance denotes activity of the inflammation. Sometimes there are little vesicles, called pustules, on the conjunctiva, slight elevations of the membrane, containing a serous fluid, and usually appearing about the margin of the cornea.

Catarrhal inflammation seldom produces much swelling of the conjunctiva, nothing like the state of chemosis, which presents itself in the inflammation before described. The only approach to such an appearance is a loose serous effusion, raising the mucous membrane from the sclerotica.

The pain in the commencement of the affection is not considerable, except in very severe cases, the patient complaining rather of a stiffness, dryness, or sensation as if sand or gravel had got into the eye. The intolerance of light is slight at first, and after a time the patient complains of scarcely any uneasiness, and opens the eye freely to the light even when there is considerable redness. The feeling as if a foreign body were in the eye, which is commonly experienced in conjunctival inflammation, appears to be produced by the partial vascular distention, and consequent inequality of surface and mechanical irritation on motion. When we take off the fulness of the vessels by bleeding the sensation subsides.

When the lachrymal discharge observed in the very commencement stops, its place is supplied by increased secretion of mucus from the inflamed membrane itself; this is at first thin, and as the inflamed membrane goes through certain changes, it becomes thicker, assuming a whitish or yellowish appearance, and sometimes putting on a character approximating to that of pus. This increased mucous discharge distinguishes the catarrhal form of inflammation. Its quantity will depend on the degree and extent of inflammation. It may be just sufficient to collect in small quantity at the corners of the eye; a whitish streak may be seen on the inside of the lower lid at the angle of reflection; there may be enough to form more or less copious incrustations about the cilia, and agglutinate the edges of the lids at night, or it may constitute a copious muco-purulent discharge, hardly distinguishable from that of mild purulent ophthalmia. The eye-lids participate, more or less, whenever there is a marked attack of catarrhal inflammation in the eye.

Other mucous membranes suffer when there is a severe attack of catarrhal ophthalmia; hence pain and sense of weight about the frontal sinuses and antrum. Under such circumstances there is more or less of catarrhal fever, chills, heat

headache, disordered stomach, and foul loaded tongue, with impaired appetite or sickness. Such a state of stomach may cause an inflammation of the conjunctiva, bearing all the marks of catarrhal character, without any atmospherical influence. The symptoms of catarrhal ophthalmia, both local and general, remit by day, and undergo exacerbation at night. During day the redness is less, there is no pain, nor intolerance of light; the eyes become sore and uneasy in the evening, smarting and burning, with increased redness and mucous secretion.

Termination and prognosis.—The affection is seated in and originally confined to the mucous membrane; it passes through a certain course and then subsides; it yields readily to treatment, and therefore, generally speaking, is free from danger. If the inflammation be violent, and either totally neglected or improperly treated, it may extend to the sclerotica and cornea, causing ulceration and opacity of the latter, and thus seriously injuring the organ. The affection is still manageable, if no mischief has actually occurred in the cornea.

Diagnosis.—Its catarrhal origin, the diurnal remission and nocturnal exacerbation of the symptoms, the absence of pain and intolerance of light, even when there is great general redness, the bright red tint of the membrane and of the distended vessels, and the superficial position of the latter, the natural state of the sclerotica and its vessels, and the mucous discharge distinguish it from common inflammation of the external tunics. From purulent ophthalmia it is distinguished by its much milder character, as you will understand better when that affection is described. Yet the characters of the two affections approximate, particularly when we compare the severest catarrhal with the mildest purulent inflammation. On the whole, the difference is rather in degree than in kind; unless it should be established, which it is not at present, that the latter always is, and the former always is not contagious.

Treatment.—Catarrhal inflammation of the eye requires antiphlogistic treatment; but, as the affection is not a serious one, and does not produce injurious consequences to the organ, mild measures will be found sufficient. Venesection is not in general necessary; but in a young subject of full habit, with catarrhal inflammation in both eyes, and that severe, a full blood-letting would be proper; in ordinary cases, cupping and leeching will suffice. The bowels should be freely evacuated by an active aperient, or, if the tongue be foul, an emetic may advantageously follow the loss of blood. Saline and sudorific medicines may then be given, such as the liquor ammoniæ acetatis, with nitre, or tartrite of antimony, and occasional purgatives. The patient should be kept warm, taking plentifully of warm diluent drinks, and no animal food, nor fermented liquor. If blood should have been taken by venesection or cupping in the morning, and the alimentary canal should have been subsequently cleared by an emetic and a purgative, the warm bath, or warm pediluvium may be used at night, and a full dose of Dover's powder (from ten to twenty grains) given at bed time. The patient will be nearly recovered the next day, or it may be necessary to repeat cupping or leeches, to persevere in low diet, diaphoretics, and purgatives for a few days, and perhaps to apply a blister to the nape. In cases where the inflammatory affection is not considerable, and seems entirely referrible to disordered state of the alimentary canal, it may not be necessary to take blood from the part. An emetic, and an active aperient containing calomel, or the latter alone may be administered, and followed by mild purgatives, the diet being light.

The best local application in these cases is warm water, or poppy fomentation; these are better than cold lotions in catarrhal inflammation. The Germans are anxious to prevent the application of cold and moisture to the eye, when labouring under catarrhal inflammation; they think that cold, which has originally caused, must aggravate the disorder, and hence they are very particular in their directions to use every thing warm, and to dry the surface carefully afterwards. However, patients often find cold washes very comfortable, and they are certainly not injurious. The sticking of the lids together during the night, may be prevented by inserting a little mild ointment between the tarsal edges in the evening; a little fresh butter, a bit of lard, or the spermaceti ointment, will answer the purpose. After employing these means until the inflammation has somewhat given way, you may resort to counter-irritation by blisters; but the other treatment which I have recommended, will in most cases put a stop to the inflammation.

It is not necessary to cover or shade the eye, unless as a protection from strong light, if it should be offensive, when the common pasteboard, covered with green silk, may be used. You will generally find that cool air is pleasant to the feelings of the patient; that it will remove the sensation of sand being in the eye.

Catarrhal inflammation of the Eyelids begins with soreness, smarting, burning, and dryness of their margins, which become red, swelled, and painful, often acutely so; the angles are generally first affected, or principally; they may suffer alone, or the whole margin may be affected. The palpebral conjunctiva is found at the time to be red, uniformly vascular, and perhaps villous. Great uneasiness is experienced on motion, with a sense of stiffness or dryness, and the feeling of a foreign body being in the eye; hence, in an acute attack, the lids are kept closed and quiet. Employment of the eye, as in reading or writing, particularly before the fire, brings on pain. A mucous discharge soon takes place from the inflamed membrane, and the pain is then succeeded by itching. The Meibomian glands participate in the affection, which begins on the ciliary margin of the lids, in the thin and delicate skin perforated by the ducts of these glands, which are themselves imbedded in the inflamed membrane. They no longer pour out the usual mild unctuous matter, which smears and softens the edges of the lids, but their secretion is suspended, so that in the morning the edges of the lids are stuck together by the increased conjunctival discharge, which has become incrusted by the evaporation of its watery part during the night. In this way the lids are often so firmly agglutinated together as to require long bathing with warm water before they can be parted. When the Meibomian secretion is renewed, it is altered in quality, being rendered viscid, and thus assisting in causing the palpebræ to stick together. This morbid secretion, spread over the cornea, affects its polish and transparency, as glass is rendered dull by extraneous impurities; hence vision is impaired, and often considerably, alarming patients for their sight, and making them ask for something to clear it. Hence frequent attempts are made to clear the cornea by moving the lids; hence, too, when vision becomes worse in the evening exacerbation of the symptoms, rings, haloes, and irides are seen round the candle, or its flame splits into stars. At the same time the uneasiness, smarting or itching, the stiffness, redness, and mucous secretion are increased.

The ciliary margins lose their cuticular covering, become actually excoriated and raw, with further changes of the Meibomian and conjunctival secretions. These irritate the lids and excoriate them externally, particularly towards the angles, and the lower lid more especially, which is often entirely deprived of its cuticle, and even ulcerated. This, which is the chronic form of the complaint, and called *lippitudo*, often lasts for many weeks, months, or even years; recurring on the application of slight causes, whether external or internal; often originating insensibly and advancing slowly, without any marked acute stage; leading to thickening of the lids, especially of the mucous lining of the lower, and consequent ectropium of that lid, and to loss of the cilia.

Causes.—Catarrhal affections of the lids are frequent, and easily explicable; beginning in the ciliary margin, where the thin and vascular membrane is necessarily and constantly exposed to atmospheric influence, and to the irritation of unhealthy secretions lodging and incrusting about the eye. According to Beer, catarrhal inflammation of the lids appears occasionally at Vienna, almost in an epidemic form, under the prevalence of cold drying winds at a particular season of the year. Although we do not see cases here in such abundance as he speaks of, they occur in so much greater number in cold and wet weather, particularly in the long prevalence of cold winds, as to indicate their atmospherical origin. But inflammation of the lids, (*ophthalmia tarsi*,) not essentially distinguishable from the catarrhal, is often produced by other causes; by any irritation applied to the ciliary margin, especially in persons of fair complexion, thin skin, and what is called a lax fibre. Thus it may be caused by residence in close confined air and smoky apartments; by confinement indoors; by much employment of the organ in candle-light; by exposure of it to vapour, smoke, and other irritants. The operation of such causes is aided and increased by neglect of personal cleanliness, indulgence in fermented liquors, particularly of the stronger kind, by other imprudences in regimen, and by inattention to the state of the bowels. Hence it is common in nurses, washerwomen, and many of the middling and lower classes, becoming at last, from long exposure to the exciting causes, inveterate and habitual.

The treatment, in the acute or incipient stage, must be of a mild antiphlogistic character. Leeches to the lids, tepid lotions, mild ointments, and active aperients at first, and afterwards alteratives and mild purgatives. It might be necessary to take blood from the temples by cupping, and the repetition of leeches is often required. Blisters may be afterwards used. The organ must be rested, and the exciting causes removed. In the chronic stage, astringents and stimulants

are not only advantageous but necessary. Scarification is most applicable to this form of complaint; the lid should be inverted, and the shoulder of the lancet drawn along, at a single stroke, from one end to the other. The vinum opii, and the metallic salts in solution may be employed; but the greatest benefit is derived from stimulating ointments applied to the ciliary margins of the lids. When thus used, they correct the Meibomian secretion, and relieve the patient from the very troublesome agglutination of the lids. The unguentum hydrargyri nitratis, or citrine ointment, is the best of these. Having gently melted it in the flame of a candle, take up a little of it with a small camel-hair pencil, and draw it once along the edge of each lid; you may previously, if the organ be not too irritable, put a small drop of the vinum opii into the eye. The red precipitate ointment (ung. hydrarg. nitrico oxydi) is used in the same way. If the patient, or an ordinary attendant, should apply either of these, their strength should be reduced one half or two-thirds. The ointment of Janin, so often recommended by Scarpa, and other foreign writers, is a mixture of Armenian bole and tutty, of each ʒij., white precipitate ʒj., and lard ʒss. The active ingredient in Singleton's, or the golden ointment, is stated by Dr. Paris to be orpiment (*auripigmentum, sulphuret of arsenic*). These stimulating local applications must not be used in an early period of the complaint; they would infallibly aggravate the inflammation and the patient's sufferings; nor must they be used when the eye is inflamed, however long the affection may have lasted, and however indisputable its title to the epithet chronic. The antiphlogistic treatment must precede in such a case. If our stimuli irritate, they must of course be laid aside.

Purulent Ophthalmia. Catarrhal ophthalmia forms a connecting link between common or simple, and purulent inflammation of the eye, in which the character of the conjunctiva as a mucous membrane is most strongly marked. Purulent ophthalmia is inflammation of the most acute kind, attended with an increased secretion, which in all its sensible properties, especially colour and consistence, so strongly resembles pus, that the name of the affection has been hence derived. This name is the best, being founded on the most obvious and striking character of the complaint: the term Blennorrhœa, derived from the Greek, and generally employed by the continental writers, is equivalent. Ophthalmia mucosa, is a name already occasionally given to the catarrhal inflammation of the eye. *Suppurative* ophthalmia is an objectionable expression, because the discharge, although resembling pus in colour, is not the product of suppuration.

The affection begins in the linings of the lids, extends to the mucous surface of the globe; when violent and not checked, it soon attacks the cornea, which it either entirely disorganises, or so considerably changes in structure, as frequently either to destroy, or seriously injure sight. The whole texture of the membrane swells, and becomes thicker; its vascular tissue is developed, the bloodvessels being distended to the highest degree, and the surface acquiring an intense bright red. The mucous surface is rendered villous, pulpy, granular, in short like the secreting surfaces of parts of the alimentary canal; and from the secreting surface, thus developed, flows the puriform discharge: but this is a secretion, or rather an exhalation, and hence the epithet suppurative is inappropriate. Indeed this form of disease does not, like some others, produce suppuration of the eye. The changes in the cornea are sloughing, ulceration, and interstitial deposition, causing opacity. The sloughing and ulceration often expose the anterior chamber, causing prolapsus of the iris, and may, by giving rise to escape of the humours and collapse of the tunics, not only destroy the function, but also the very form of the eye.

Purulent ophthalmia is originally seated in and confined to the mucous membrane, and often goes through its course without extending further: if it goes deeper, it is by the propagation of inflammation through the medium of continuous textures, and especially by the progress of ulceration.

It attacks at all ages, and under all circumstances, and seems to be always essentially the same: yet there are modifications. I shall describe to you three forms of it, viz.:

1. *Purulent Ophthalmia* of newly born infants;
2. *Purulent Ophthalmia* after infancy;
3. *Gonorrhœal Ophthalmia.*

The two first are unquestionably the same affection, distinguished only by circumstances arising out of the age of the patient. There are some peculiarities in the latter, referrible probably to the specific nature of the cause.

LECTURES

ON THE

THEORY AND PRACTICE OF PHYSIC,

By DR. CLUTTERBUCK.

Theatre, General Dispensary, Aldersgate-street.

Lecture X.

Gentlemen,

In my last lecture, I was speaking of the muscularity of arteries; and I enumerated several of the proofs which we have of its existence. Unless we admit this, it will be impossible to understand many of the most important phenomena that occur, both in health and disease. I have mentioned to you, that the circulation of the blood was attributable principally to the action of the blood-vessels themselves; and that the heart contributed but a small share in the performance of this function. The heart, in fact, appears to do little more than supply the arteries with blood, upon which they are to act. I need not observe, that this is not a new view of the subject, it is one which was entertained by Mr. John Hunter, and was founded on numerous experiments and observations; it was maintained also by the Monro's of Edinburgh, particularly the late Dr. Monro, than whom a sounder physiologist perhaps never existed.

The arguments which have been brought forward of late in proof of the non-muscularity of arteries, do not at all, as I think, invalidate the opinion; in fact, every thing appears to confirm it. The principal argument which has been brought against it is, that no distinct fibrous structure, similar to that of the larger muscles, is visible in arteries or veins. Now admitting this to be the fact, it does not follow that they are not possessed of muscular powers. The functions and actions of these parts are sufficient to prove that they are so, whether muscular fibres are visible or not. But upon this point anatomists are not agreed. Some deny that a fibrous or muscular structure exists in arteries, while others have demonstrated such a structure to the satisfaction of observers.

The muscularity of the blood-vessels has been denied also, on the ground of their chemical composition. They have been examined, and found not to contain *fibrine*, which is said to be an essential part of muscle. But this is begging the question; arguments drawn from this source are of little avail; animal chemistry is not sufficiently advanced, to render such a conclusion certain or satisfactory.

Admitting then, that arteries are muscular or possessed of muscular power, it will be useful to inquire into the manner in which they perform their office; viz. that of circulating the blood. The natural action of muscles is *contraction*; but it is evident that simple permanent contraction could not, in this case, answer the purpose. It could only tend to close the vessels, and thus impede the course of the blood through them. It is nothing but an *oscillatory* kind of contraction, that is, alternately with relaxation, that can produce such an effect. It is such a kind of contraction as we observe in the heart itself. It is not unreasonable to suppose, *a priori*, that the contraction of arteries would be oscillatory, as well as that of the heart, seeing that they are continuous and engaged in the same office. Such an oscillatory action must indeed, of necessity, be admitted, inorder to account for the blood being propelled onwards. Most kinds of muscular action taking place in the body, are more or less oscillatory. The heart acts naturally in this way; its action is alternated with relaxation. In the intestinal canal, the same kind of contraction takes place; it is not a continued contraction of the canal, as this would have no effect in propelling the contents, but the contrary; it is contraction of an oscillatory kind. The contraction begins at the top of the tube, and is continued in the different portions of the canal, and thus it has the effect of propelling the contents forward. Even in the large voluntary muscles, we observe a somewhat similar mode of action. When they are kept in action long together, it is probably by the successive contraction of the individual fibres, and not by the continued action of all at once; some relaxing while others are contracting. As an immense number of fibres are employed, the general result is still continued contraction, although the individual fibres are not all at the same time in action. When a muscle is continued long in action, it becomes tremulous; so that even here, there seems reason to believe that the contraction is not constant with respect to the individual fibres, though the effect upon the whole may be contraction; one fibre taking up the action after another ceases to act. In spasm, which is a diseased action, it may be otherwise. But even here we are not sure that such is the case; for, in tetanus, there is

always a degree of relaxation taking place at short intervals. One moment, the patient is comparatively easy, and at another the spasms are renewed with increased violence. The action even in this case is not equally violent; showing, that muscular contraction cannot be uniformly continued in the same individual fibres.

Now if we admit the blood vessels to have a muscular power, it is not difficult to see how the effect of circulating the blood is produced. The heart, by contracting upon the blood, drives it into the beginning of the arterial system; this produces distention of the artery, which is one of the most powerful causes of muscular action; the artery, feeling the distention, reacts upon the distending power, (the blood,) and of course the blood must move from this compression. Now it cannot move backwards, on account of the valves placed at the commencement of the artery, and therefore the force that the artery exerts upon the blood must have the effect of moving it forwards. This naturally tends again to distend the second portion of the artery, which, by the distention, is in its turn excited, and re-acting upon the blood forces it still onward; and thus, in succession, one portion acting upon another, would have the effect of putting the whole column of blood into motion; the heart, emptying itself, will have a fresh supply from the veins; and the blood, being once put into motion, is so continued by the action taking place in the blood vessels. In the extremities of the arterial system, the capillaries, the contractile power is greater than in the larger trunk, and there is a necessity for this, because the obstacles are greater there. The viscid quality of the blood, and the minuteness of the vessels, render a greater muscular power necessary in the small than in the large vessels.

We are not to suppose that the blood vessels, although they have contractile power, empty themselves in contracting; the degree in which the contraction takes place is, on the contrary, very small, so as to be hardly perceptible in a quiet state of the circulation; it is not as with the heart, which appears to empty itself when it contracts. The blood vessels do not do this, they contract with a certain force upon the column of blood, but not sufficient to empty the vessel. We are apt to be deceived in this respect in feeling the pulse, and to imagine that every time the heart beats the artery is greatly distended, and that it contracts again as soon as the action of the heart ceases. There is not, however, that degree of expansion of an artery, during a pulsation of the heart, that the finger would lead us to imagine. If we look at an artery when laid bare, the degree in which it expands during the impulse of the blood is so small as to be scarcely perceptible. If the circulation is hurried, it may be seen, but not commonly, in the ordinary state of the circulation; yet the finger would lead us to believe, that there was a great degree of expansion and contraction. We may see this without laying bare the arteries; if we examine the temporal artery in old people, and look attentively at it, it is seldom that any contraction is visible, and the artery is liable thus to be mistaken for a vein; indeed I have seen this to be the case, and the mistake has gone so far, that an artery has been punctured under the impression that it was a vein; but the finger would readily have detected this. A stroke is made by the impulse which the blood gives in its attempt to move forward. When the finger is removed, scarcely any dilatation can be perceived, although, if the artery be compressed by the finger, a powerful stroke will be felt.

This may be considered as what is taking place in the arteries in general; when they contract, their diameter is not greatly lessened, yet the impulse they give to the blood is sufficient to move it onwards; and this action being continued throughout the whole arterial system is sufficient to keep the blood in motion; it is even probable that a similar action takes place in veins, though in a less degree.

The arteries, as I have just stated, do not very sensibly dilate when an impulse from the heart is given to the blood, and this has been considered as a proof that the arteries are not muscular, whereas, upon reflection, you will see that it is a proof of the contrary; elasticity, merely, could not explain it. If the arteries were mere elastic tubes, (like an elastic gum catheter, for example,) they would become distended in proportion to the distending force applied; but that they do not sensibly enlarge under the application of this force, is a proof that they are not mere elastic tubes. Nothing but muscularity could keep them in a nearly uniform state of distention, where the distending force is varying at every instant. As soon as the rush of blood takes place, the tendency to distention is perceived by the artery, and that instant the muscular contraction begins, in a degree just sufficient to resist any considerable distention. If distention took place, as would be the case if the arteries possessed elasticity merely, the force that moves the blood onwards would be in a great

measure lost, whereas the muscular power propels it onwards. The contraction of the muscular coat does not go beyond this, because a greater contraction of vessel would unfit it for receiving a further supply of blood. It is only upon this principle, as I conceive, that the non-distention of the artery can be explained.

Gentlemen, this reasoning may appear to some of you, who have not much attended to the subject, as rather abstruse, but it is of too much practical importance to be passed over hastily; it is a subject deserving of your closest attention.

The natural obstacles to the circulation of the blood are so great, that it is inconceivable that the heart alone could put the whole column of blood into that degree of motion which actually takes place, and that even in the veins, after having passed through the capillaries.—The power of the heart, indeed, has been estimated at a very high rate, and even as being equal to the weight of some thousands of pounds; but the force of the heart cannot be very great, as a very slight force is sufficient to stop the current of blood through an artery; and if an artery be laid open, the column of blood which flows out does not rise many inches in height. All that has been said, therefore, of the immense power of the heart is without foundation; it is, in fact, hardly possible to conceive, that the heart alone could accomplish such a purpose, if we consider how difficult it must be to move so viscid a fluid as the blood through such innumerable minute tubes as the arterial system consists of. The tendency to adhere to the sides of the vessels through which it is passing, the currents meeting each other and thus offering fresh impediments, the pressure of the skin and cellular membrane, these, together, are such obstacles to the motion of the blood as can only be overcome by the muscular power of the vessels themselves. If we were to suppose the arteries to be formed of a substance similar to elastic gum, and divided into minute ramifications, as the arteries are, we cannot conceive any degree of force applied to the trunk sufficient to move the blood through such an innumerable quantity of tubes. The insufficiency of the mere *vis a tergo* derived from the heart, to effect the circulation of the blood, may be judged of from the difficulty there is in forcing any fluid, especially a viscid one, such as a solution of glue or size, by means of a syringe, through the arteries into the veins in a dead body, whatever force be applied for the purpose, so that it is esteemed a fortunate injection when the veins can be thus filled from the arteries, these generally bursting before the object is accomplished.

Elastic tubes re-act in the same degree that they are acted upon. The same degree of force which is applied in distending a tube of this description is exerted in restoring it to its former dimensions, and little additional impulse would be thus given to the blood to drive it onwards; but this does not apply to muscular action, which is governed by totally different laws. The force and degree in which the artery contracts, are not determined merely by the distending force applied, but may be greater or less according to the necessity of the case, and the muscular power and disposition to act possessed by the artery.

I have before mentioned, that the state of the arteries after death is, in fact, a proof of their muscular power, otherwise no reason can be assigned why they should not contain a considerable quantity of blood, as during life all the vessels are filled with it. There is constantly, during life, that degree of contraction in the vessels which keeps their sides in contact with the blood; unless this were the case the circulation would be at a stand. After death all the arteries are found empty; now this would not be the case were the arteries merely elastic tubes, for elasticity is not influenced by life. Parts that are elastic retain their elasticity after death. Another circumstance showing that the movement of the blood is not altogether owing to the heart is, that the blood moves in a continued stream; whereas, if the motion of it depended solely upon the heart, it would cease to flow when the heart ceased to contract. The heart acts in an oscillatory, or pulsatory manner, and when the stroke is over it can no longer influence the blood. yet if an artery be opened the blood flows in a continuous stream. It is evident, therefore, that the heart is not the only moving power; and there is no other cause to which we can attribute the motion of the blood except the blood vessels themselves, and it has been shown that elasticity merely would not effect the purpose.

There seem to be two kinds of muscular action exerted by blood vessels, one which is constant, and which merely serves to adapt them to their contents, or to keep their sides in contact with the blood; this may be called the *tonic contraction*. The other, the *oscillatory*, or *pulsatory* action, similar to that of the heart, is that which drives the blood onwards in its course, and may hence be called the *propulsive action*.

The *tonic* contraction is continued as

long as life lasts; it has no direct effect in the circulation of the blood, but by keeping the sides of the vessels in contact with the blood, the oscillatory or propulsive action is enabled to exert its influence, so as to drive it onwards. This tonic contraction depends upon life, as all muscular action does, and ceases with life; and hence it is that, after death, we find the sides of the vessels no longer in contact with the blood, and the arteries in consequence appear empty. Several circumstances influence the tonic contraction, one of which is cold, which appears to increase it. If cold be applied to any part of the body, the vessels of that part are seen to become contracted. If, for example, the arm be plunged into cold water, the skin turns pale, from the contraction of the superficial vessels, and the pulse at the wrist becomes smaller. A partial application of cold is often sufficient to produce an increase of this contraction over the whole external surface of the body; this is the result of sympathy. On the other hand, heat appears to lessen the *tonic* contraction. If the body be immersed in hot water, all the external vessels become greatly enlarged in consequence of this contraction being diminished, and the same is the case with the artery at the wrist. This may perhaps in part be ascribable to the increased momentum of the blood, by which the *tonic* contraction is overcome, and the vessels in consequence expanded. Emotions of the mind, likewise, appear to influence it. If the mind is under the influence of fear, the *tonic* contraction will be increased, as is known by the paleness of the skin, and the diminished size of the pulse at the wrist. Certain states of disease also increase it, as, for example, the *cold stage* of an intermittent fever.

The abstraction of blood renders more of this *tonic* contraction of the vessels necessary. If blood be taken away largely, the vessels contract upon it in the same degree, so as to bring their sides in contact with the remaining blood; and unless this takes place, the circulation must be at a stand, and syncope or fainting ensue. So that if the blood flows faster than the vessels are disposed to contract, fainting takes place. This contraction of the vessels is not at all times exerted with the same degree of readiness, but differs in different individuals, and in the same individual at different times, according to the state of health, and the nature of the disease present. Fainting from loss of blood is not owing simply to weakness, nor is it in proportion to the quantity of blood lost; for the strongest persons sometimes faint from the loss even of a small quantity of blood, while weak persons often bear to lose large quantities of blood, without any such effect. This difference arises from the disposition to contract being greater or less in different individuals. In some, although blood be drawn slowly, and in small quantity, yet, as the contraction does not take place in proportion, fainting occurs. Persons are more liable to faint from a first bleeding, than upon a repetition of it; this, therefore, is a proof that it does not proceed from weakness merely, but from the cause mentioned. In some diseases, the disposition to contract is increased beyond the natural degree, as in inflammatory diseases, and in a febrile state of system, and syncope then does not so readily take place.

There are certain medicines which appear to have the effect of increasing the *tonic* contraction of the vessels, such are termed *tonics*. Of this kind are astringents, both vegetable and mineral, and acids. There are others which diminish it, as *narcotics*, but especially the *digitalis*. It is this *tonic* contraction which gives firmness and hardness to the pulse, and hence the pulse becomes a sign by which we can pretty well judge of the state of the system in this respect. If the *tonic* contraction be in a proper degree, the pulse has the firmness of health; but if there be a deficiency of it, it renders the pulse preternaturally soft, and the solids altogether loose and flabby to the touch.

The other kind of contraction of vessels, is that upon which the movement of the blood more particularly depends, and which is most concerned in the production of disease. This is what I have called the *propulsive* or *oscillatory action*.

The *oscillatory* or *propulsive* action of arteries, exerts the same effect upon the blood that the heart does. The *tonic* contraction, as before observed, keeps the sides of the vessels in contact with the blood, in order that the *propulsive* power may act upon it. This action is not continued, but, like the former, is alternated with relaxation, although the pulsation is not so visible as that of the heart.

I may illustrate this by reference to the urinary bladder. Whatever quantity of urine the bladder contains, it may be said to be always full; there is no vacuity into which air can enter. Now the contraction which keeps the sides of the bladder always in contact with the urine, resembles the *tonic* contraction of the arteries. That this is not the effect of mere elasticity, but a vital property, is proved by its ceasing with life. The power by

which the urine is expelled, is in like manner similar to the *propulsive* action of the arteries.

The *tonic* contraction could not expel the urine from the bladder; it requires another power to do this This power is not exerted constantly, but occasionally only, and in this respect may be compared with the propulsive action of the heart and arteries.

The *propulsive* action of the vessels has a greater share in the circulation of the blood, than that of the heart itself; for although the power of each vessel individually taken, is but trifling, yet the whole taken together is very great. This action is capable of being exerted with equal force under different states of distention of the arteries, and hence it appears, that the *tonic* and *propulsive* action do not necessarily correspond. It does not follow that, because an artery is much distended, its propelling power is weakened. On the contrary, we often find the arteries acting with the greatest vigour when they are the most distended, and when of course they contain the greatest quantity of blood. If the arm be plunged into hot water, the pulse will become twice the size of the opposite arm, and yet the blood is circulating in it with greater rapidity, as is proved by opening a vein under such circumstances. This is worth mentioning, because it has been said, that the enlargement of the vessels is a proof of their weakness, and that it is from this cause that they yield to distention. What I have just mentioned, is sufficient to negative this opinion, for in a distended state of arteries, the circulation goes on more rapidly than in an ordinary state of fulness. Now this cannot depend upon the heart, because in these cases, the action of the heart is not changed. Such partial alterations in the state of the circulation can only be explained, by referring them to the blood vessels themselves. The urinary bladder is not weakened by distention, provided the distention is within any moderate limits. On the contrary, it acts more powerfully upon half a pint of urine, than upon a less quantity. When the accumulation of urine is greatest, it is discharged with the greatest force, provided the distention is not carried so far as to paralyse the bladder altogether.

The *propulsive* action of the arteries is *oscillatory*, or *pulsatory*, because it is derived primarily from the heart. The heart gives the first impulse to this action, which the vessels repeat, and so on in succession to the extremities, producing an undulatory or wave-like motion of the blood. The motion of the blood is quickened every time the heart acts, because it excites contraction in the arteries. In the ordinary or healthy state of the circulation, the *oscillatory* or *propulsive* action of the arteries corresponds, both in force and in frequency, with the action of the heart, so that we can judge in some measure of the heart's action, by examining the pulse. In diseases, however, there is often an inequality observed. The action of the heart may be then more frequent than the pulse, as in palpitation, where some of the beats of the heart are not perceived at the wrist. The pulse at the wrist is never more frequent than the action of the heart, though it may be less so; nor is the frequency of pulse different at the different wrists, because the frequency is derived from the heart. The degree of the propulsive action, and consequently the force of the circulation, is judged of by the *strength* of the pulse, that is, by the force required to compress the artery, so as to stop the current of blood through it. This, however, is not always a measure of the general strength of system, though it sometimes is so.

DOCTOR FINLAYSON AND HIS ESSAY.

We give the following replication to the analysis of an Essay on Dry Rot, &c. [No. 119, p. 380.] a place in our Journal to gratify the Author, and all who admire modesty and politeness, and adherence to truth.

To the Editor of THE LANCET.

Cheltenham, 3d Jan. 1826.

SIR,—I have herewith sent you a Reply to your Review of my Essay of the 10th December last, and I have to hope that, after admitting so severe and so unjust a criticism into the pages of THE LANCET, you will also have the candour to admit my reply. Should you not accede to this, I will consider myself very unfairly dealt with; and will forward copies of it to the Medical and Chirurgical Review, and other periodical works, for their insertion; but would prefer seeing it in the sheets of THE LANCET, in order that those who have read the Review may also read the Reply, and then I shall be satisfied with their conclusions.

I am, Sir, your most obedient,

ROBERT FINLAYSON.

2, *Portland Street.*

REPLY

To THE LANCET'S *Review of An Essay addressed to Captains of the Royal Navy, and those of the Merchants' Service, on the means of preserving the Health of their Crews; with directions for the prevention of Dry Rot in Ships. By* ROBERT FINLAYSON, M.D. *Surgeon, Royal Navy.*

"Tea criticise a rong for one who writes amiss."

THE LANCET begins his Review of my Essay in the following terms:—"The author (says he) commences his work by making what he calls a few 'proemial observations,' which are puerile enough, and have no manner of relation to the subject upon which he has undertaken to write."

Now, that declaration is entirely untrue, I shall be able to prove out of the reviewer's own mouth, and by quotations from the said proemial observations. It will be recollected, that the object I had in view, in writing the Essay, was to point out the baneful influence of so frequently *washing decks* in the royal navy. My reviewer says, "the author concludes his proem, by telling us that it is against the system of *washing decks* he has to enter his protest;" forgetting that he has already stated, that the proemial observations have no manner of relation to the subject upon which he has undertaken to write. Again, at page 6th of the Proemial Observations, we find the following remarks: "Yet, owing to the existence of certain long established and pernicious regulations with regard to washing decks, and the sudden changes to which sailors are exposed in consequence, this class of men are rendered peculiarly liable to repeated attacks of inflammatory disease. It is with a view, therefore, of being the means of removing some of the existing causes of inflammation that this Essay has been written; for every one will admit that the prevention of disease is better than its cure."*

My reviewer goes on to state, "but as only 14 pages of the work are devoted to that subject, in all its bearings, we are at a loss to discover for what purpose he has put forth the present volume." Here, again, is another willing and gross misrepresentation, as the reader will be convinced of, by turning to the Essay; and after having deducted 10 pages for the proemial observations, and 6 for the chapter on drunkenness, he will find 36 pages remaining on the subject of washing decks, "in all its bearings," in place of 14 pages. This is a point of no medical importance; but being a tangible one, it has a tendency to show the malignant spirit of my reviewer.*

positively assure them; and in addition to what we have already extracted, we may adduce the following in proof of the assertion. The author, it seems, has procured a diploma.

"The late preference held out by the Commissioners for victualling his Majesty's Navy, to such as may have graduated at the different Universities, cannot fail to have the most beneficial tendency, by exciting more vigorous exertions on the part of the young medical officer: and in this way the best interests of the navy have been advanced."

> "A *wise physician*, skilled our *wounds to heal*,
> Is more than armies to the public weal."

Finlayson, p. 5.

After descanting on the nautical diversions of *black-listing*, *black-holding*, and *burnishing* of bolts, bars, &c., he passes on to the *orgies* of Point-street.

"This humorous and thoughtless body of men (sailors) are too often seen spending their holidays on shore, where they commonly *indulge in drinking, and make use of loose and indecorous language*," &c. &c. p. 9.

"The young gentlemen who have lately entered the navy as midshipmen have received a most appropriate education, &c. p. 7.

"The *theory* of gunnery is now much better understood among sailors than it was formerly, &c. ib.

"Pensions for wounds and servitude have been granted to seamen, &c. p. 8.

"Good and glorious actions are soon forgotten, or *swept* away in the current of passing events," &c. p. 9.

So much for the proemial observations.

* That the "proemial observations" have no manner of relation to the subject of washing decks we might easily prove, but happily for the patience of our readers we have no occasion, since the author has himself *demonstrated* the truth of the remark. For although these "proemial observations" occupy *no less than ten pages, or a fifth of the entire Essay*, he has only been able to cull, from the profusion of rubbish, *twelve simple lines*, which he attempts to foist upon the public as a genuine sample of the remainder. That it is far otherwise we do

* The 36 pages which remain, after deducting 10 pages for the proemial ob-

After my critic has made a quotation from page 14 to 17, treating "of washing the main and quarter decks," he makes what he considers the following *piquante* observation. "Now this is a process with which Captains of the Royal Navy, and the Merchant Service, must have been long familiar, whence it must be concluded, either that the Essay, though addressed to them, was written for others, or that the author could have no specific object in going to press." This is truly a new kind of logic, for it is here made a wonder to address the body we mean to correct; for instance, I write this article for the correction of my reviewer, and address it to the Editor of THE LANCET accordingly, exactly in the same manner that I addressed the Essay to Captains of the Royal Navy, &c., to point out to them the baneful influence of so frequently washing decks.*

The following precious morsel from my reviewer forms perhaps the most perfect specimen of ignorance, in nautical medicine, ever tried to be pawned on the public.

"Besides," says he, "if there be such a profusion of water employed, it is pretty plain, that the evaporation from the deck of the ship cannot be much greater than is constantly taking place from the surface of the ocean." What an assertion is this to make for a man who puts himself forward as a critic in medical science! When a bucket of water is drawn from the ocean and dashed on the deck, it is evident where so large a surface is exposed to the atmosphere, and sun's rays, that the most rapid evaporation must take place, at least ten times greater than that which arises from "the surface of the ocean" under its diminished temperature. But is my reviewer aware that seamen are warm blooded animals, and cannot live on "the surface of the ocean"? Unless he will undertake to give them a simple respiration, provide them with gills, fins, and scales like fishes; or fit them out with feet and wings on the principle of the sea-gull. Now, the fact stands thus, seamen are, in all respects like other men, constantly under the influence of atmospherical change. After they have been wet on deck, they must change their clothes when they go below, and the lower deck and hammocks must be kept dry, otherwise we shall have a sickly ship's company. This is a rule to which there is no general exception; ships being healthy in the temperate zones, in the exact ratio to the dryness of their decks, and the care the officer takes in making seamen change their wet clothing.*

servations, and 6 for the section on drunkenness, are not, as the writer states, devoted to the subject of "washing decks," but to disquisitions on "bilge water," "hempen cables," "impure air," "wind-sails and stoves," "means of preventing drunkenness," &c. &c. He is therefore guilty of deliberate and irrefragable falsehoods.

* Should the author address the profession on the impropriety of blood-letting, he would of course begin by teaching them the elements of their art, describe the various operations of venesection, arteriotomy, cupping, &c., and the instruments employed. Supposing the public the parties addressed, this course might be proper enough, but to the former it would be no less marvellously simple, than for a doctor of the navy to pretend to teach a commander the discipline of his ship, or to tell him at what time of the morning his decks are washed, and how the service is performed. O the villany of this book-making age.

* "Seamen," says the Doctor, "are in all respects like other men, and cannot live *on* the surface of the ocean," (ocean *passim*, Finlayson,) although it would seem from what he says at page 16 of his book, they find no difficulty in living *beneath* it; for he gravely assures us that they pass "three hours and a half of an *amphibious* existence, previous to going to breakfast." &c. After indulging in the pleasantries of Sir John Mandeville and the famous Pinto, we should have thought the writer would find the translation to stale *truisms* somewhat difficult. Not so however; "seamen," he tells us, "are like other men," "warm-blooded animals, under the influence of atmospheric changes," &c. &c. which as efforts of wit may vie with the saltatory capabilities of an elephant. As to what the Doctor says of the evaporation from the deck of the ship, we have only to repeat what we have already said, "that if such a profusion of water be employed, the evaporation from the deck cannot be much greater than from the surrounding ocean." "Water," says the author, "is thrown on the decks in the *greatest profusion*," p. 15, and again p. 18, "as the washing is supposed to do good and be salutary in proportion to the *quantity* of the element used, I have frequently seen the deck covered with water to a considerable depth." Under this process

Again says the reviewer, "we wish the Doctor would tell us by what process he discovered that carbonate of lime is so greedy of oxygen, for if the assertion be true, Sir H. Davy's theory is false, which we will wager him a trifle is not the case." In reply to this I make the following quotations from two eminent chemists: "Newly white-washed walls are said to be *unwholesome*, from the lime absorbing the oxygenous part of the atmosphere."—Murray. "Lime has the property of leezing oxygen from the atmosphere; hence the unhealthiness of rooms newly white-washed.—Parkinson." Now will you have the *complaisance* to tell me where Sir H. Davy says lime does not absorb oxygen from the atmosphere? for after having so often detected you in so small a space, you must excuse me for not taking any future assertion on credit. But even granting Sir H. Davy has discovered such a thing, since the publication of my first edition, I am in no respect blameable.*

We next come to this bold assertion: "Washing and scrubbing are not unpleasant parts of the service, and it has not been proved that they are injurious to health." I will leave it to the public to decide whether it is unpleasant or not, to be called out of a warm hammock, early in the morning in the month of January, in the channel or north sea, to work half naked on deck, with the thermometer at or below the freezing point, for several hours together. With regard to the second assertion that "washing decks has not been proved to be injurious to the health," I have shown, at page 24 in the Essay, the difference of the list of sick, in the same ship, on the same station, and performing exactly the same kind of service, under the different systems of dry holy stoning, and washing decks. But in order to lay the watery scene more particularly before the reader, I will take the liberty of making some extracts from the chapter on washing the lower deck, especially as my reviewer has taken great pains to pass by that section in silence, although it contains the gravest charges in the Essay; because, I conclude, he knew of no means by which they could be justified.

Page 26. "Let us now return and take a careful survey of the lower deck half an hour after this system of washing has been finished, and let us observe the influence of the moisture on the health of the inmates. It ought to be kept in mind, that the men have been labouring *in* water since half past four o'clock, with the exception of the breakfast hour; and then their clothes had been wetted by previously drawing, carrying, and throwing water on the main and quarter decks. Under this system of cleaning the ship, let us suppose the month of December has been ushered in, and on examination, we *will* find the deck and every other article below, thoroughly saturated with moisture, and in this most miserable situation, will generally be found the following persons sitting or laying on deck, and that most probably in canvas trowsers, viz. individuals resting from fatigue; the habitual drunkard taking his nap after last night's debauch; tailors who are compelled to sit on deck *professionally*: seamen and marines, making, mending, or cleaning clothes; the lazy, the delicate, and those undergoing a course of medicine, are all doomed to suffer by this *humid* enemy, from which they cannot fly, and which has now become fixed in the decks after such constant previous application, and long before it can be dried by animal or combustible heat, it is again deemed necessary to have recourse to ablution, and so on ad infinitum."

Page 44. "It is well known that, during sleep, the heat of the hammocks, crowded state of the lower deck, and fuller action of the heart, elicits the circulation more to the surface of the body than in the erect position. When, therefore, seamen are called up in this state, to work in water under the diminished temperature of the morning, the rush of blood from the surface to the centre is such, that no individual having the least tendency to internal disease, can sustain the shock, without suffering the most manifest injury."

And again at page 16, "Let it be remembered that, in this watery circle, the victims of venereal pleasure, who have just completed their six weeks' course of alterative medicine, meet with the hepatic valetudinarian after a long residence in a tropical climate; or the friend of his youth, who has a predisposition to, or is already affected with, incipient consumption, &c., all performing their various parts in the watery throng."

---

the temperature of the deck must be that of the ocean, and a "rapid evaporation" is out of the question.

* The metallic bases of the alkalies and some of the earths were, as all our readers know, discovered by Davy in 1807, and as lime is the *only* combination of oxygen with calcinum that exists in nature or can be formed by art, it can have no affinity for oxygen.

Now, I presume, the above quotations will be quite sufficient to convince every sound mind, of the injury sustained by too frequently washing decks; more especially, when we recollect that, the only permanent means of drying the lower deck is through the medium of animal heat, I mean the evaporation of moisture from the lower deck, by the *abstraction of heat from the human body*.

I may here add, that in the temperate zones, we can trace the great majority of diseases, which occur at sea, to two causes, namely, to the men getting wet, and omitting to change their clothes when they go below: and to getting drunk, and sleeping *on* the moist lower deck in their clothes. Some estimate may be formed of the mischief produced by those causes, from the immense number invalided. I have been informed on the most unquestionable authority, that, during the last ten years of the late war, no less than twenty-four thousand men at an average, were invalided annually, a great proportion of whom had affections of the chest and rheumatism. To conclude, I have no hesitation in stating, that for every one invalided by wounds in the late war, ten have been invalided by diseases contracted from drenched decks.*

* Here again the author has misrepresented us, for we did not *assert* that washing and scrubbing were *not* unpleasant parts of the service," but hinted that such a corollary might be deduced from his own observations. He had remarked, that "cleaning *a ship's hold* is a duty that is, in general, *carelessly performed*, because *it is* an *unpleasant part of the service*, and one that leaves no external mark for approbation, *like washing and scrubbing*;" whence it naturally follows, that washing and scrubbing are *not unpleasant* parts of the service; and unless the author's assertions be taken as evidence, it has not been proved that they are injurious to health. The very person who denounces the measures is obliged to introduce a multitude of ideal personages into his picture, in order to give an interest to the scene. Thus he has "the *victims* of venereal *pleasure*, who have just completed their six weeks' course of *alterative* medicine;" the hepatic valetudinarian "and the friend of his youth, who has a *predisposition to incipient* consumption, all performing their various parts in the watery throng." The conclusion of the sentence is exquisitely beautiful, but, unfortunately, we are left to grope for his meaning; nor are we in less uncertainty respecting the commencement, never having seen a victim of "venereal *pleasure*," except in the person of a quondam servant of ours, who was sent to the treadmill for refusing to provide for an illegitimate child.

Again, says my reviewer, "The next section of this Essay is devoted to the consideration of "impure air," and it is altogether of a piece with the remainder of the work. The author sets out with a long quotation from Darwin, beginning with,—

The vital air
Pervades the swarming *sea*;

The last word of which he has taken care to print in italics, to convince us that there is vital air at sea as well as on shore." Will it be believed, that my reviewer has committed four blunders in writing this short paragraph. 1st. It is not "a long quotation," being only six lines. 2d. The lines are Darwin's, therefore, I cannot be accused of giving them any meaning, but what they imply. 3d. It is a mis-quotation, the line being garbled; it stands thus in the Essay:—

The vital air
Pervades the swarming sea, and heaving earths,
Where teeming nature broods her myriad births.

4th. He has either wilfully or ignorantly misconstrued the meaning of the passage. Darwin meant, that "vital air" was necessary to the existence of every animated creature, whether in the sea or earth.

The author further remarks, that the only permanent means of drying the lower deck, is through the medium of animal heat. "I mean," says he, "the evaporation of moisture from the lower deck, by the abstraction of heat from the human body." Stoves are incapable of drying the lower deck. "For," says he, (p. 35,) "owing to the peculiar construction of a ship's stove, the rays of heat are totally radiated upwards, *drying only the atmosphere* and ceiling of the deck, leaving the lower deck in nearly its original humid state." This is chemical philosophy with a vengeance! Drying the air contained in a place "saturated with humidity," is, indeed, a very pretty experiment, but will the doctor believe us, that the more heat he applies, the greater quantity of vapour will the said air be found to suspend. To propose to dry an elastic fluid, by the application of heat, is, without exception, the greatest absurdity we ever heard of!

Perhaps my reviewer will be astounded to learn, that

"Leaves, lungs, and gills, the vital ether breathe,
On Earth's green surface, or the waves beneath."*

The reviewer passes on to make this remark:—

"He concludes the section by telling us, that *moist* air is *lighter* than *dry* air, which has convinced us that he is utterly incorrigible." In answer to this chuckling, I give the following quotations from Samuel Parkes' Chemical Catechism, page 54:—

"It is remarkable whenever aqueous vapour is united to atmospheric air, an augmentation of volume is the consequence, and *damp air* is always specifically *lighter than dry air*." Again, at page 38,

"Whenever the air is ponderous, and susceptible of holding the aqueous vapour in solution, the mercury in the barometer rises up to 30° or upwards: when lighter and liable to suffer the vapours to coalesce, its pressure is less on the base of the barometer, and the mercury falls." Gay Lussac somewhere makes the same remark.*

Having already so frequently detected my reviewer in error, and making garbled quotations, &c., I shall only trouble my readers with another precious specimen, which, for its baseness, stands unequalled in the annals of criticism. It is this: "In a note to this section, he says, that during his late period of servitude in H. M. ship Phaeton, punishment *for drunkenness* had been exceedingly rare, yet, he continues, I never served in a ship with so few drunkards, making it a wonder, that where there were so few drunkards, so few should have been punished for being drunk." Now, the

---

*The author charges us with having committed four blunders.—"First," says he, "it is not a *long* quotation being *only* six lines." This, again, is another misstatement, for there are *seven lines, or rather more than an eighth of the whole section*, and it may therefore be fairly called a *long* quotation. Secondly, says he, "the lines are Darwin's, therefore I cannot be accused of giving them any meaning but what they imply." But either the passage has no reference to the subject, in which case it is grossly and absurdly introduced, or the author has given it a meaning "which it does not imply," and is guilty of mis-representation. One horn of the dilemma must infallibly catch him.

The section which succeeds his precious quotation from the tetandrian monogynian poet is monstrously profound, and vastly superior to the ordinary lispings of a boarding-school miss, who has cogitated for a quarter of a year over Parkes', or some similar work on Chemistry.

The following is a sample.

"The necessity of animals breathing pure air, in order to enjoy good health, has been admitted, even by those who entertain opposite opinions on almost every other subject. Even food itself is of less importance to warm blooded animals than *pure* atmospheric air. The one, we only require at stated periods, but our demand for the other is continual during the whole of our existence! Happily for man he has not to *depend upon his own industry*, nor the caprice of others, for his *atmospherical supply*, otherwise his preservation (life) would have been in continual danger," &c. p. 31.

Did ever mortal read such trash?

*While the vapours which are dissipated in the atmosphere retain their elasticity, we are accustomed to say that the air is dry, because we feel no sensation of dampness until the temperature being changed, the particles of water, more or less, approach each other, and descend either as a fog, or having coalesced as rain, snow, &c. The quantity of water in the atmosphere being considerably greater in summer, when the barometer ranges higher than in winter, proves that the mercury is not suspended by the *weight* of the air *alone*, but in part by its *elasticity*; and as moist air is very inelastic, it of course falls. The weight of a column of air, as indicated by the barometer, being therefore no correct test of the gravity of the whole atmosphere, it is much less of that "in which we live, and move, and have our being." We may further observe, that perfectly dry air exists not in nature, except perhaps occasionally in the sandy deserts of the torrid zone. It may, however, be readily obtained, by passing such as the atmosphere affords over dried and heated muriate of lime. When thus prepared, if it be passed over water at 60 degrees, its volume will be increased about 1.69 per cent., and the specific gravity of the mixture will, for every 100 inches, be diminished about a quarter of a grain. Hydrogen, however, the lightest of the gases, placed under similar circumstances, will much increase its specific gravity. We have made these remarks out of respect to the memory of poor Parkes, whose opinion the author has quoted.

note referred to at page 40, stands thus: "It ought to be highly gratifying to every British subject, to learn how very sparingly the *rod of correction* is now used in the naval service, without any falling off in point of discipline or morality on the part of the seamen.

During my late triennial period of servitude in H. M. ship Phaeton, punishment has been exceedingly rare, but well directed, yet I never served in a ship with so few drunkards."

Now it will be observed, that the reviewer has here omitted the first part of the note altogether, and that he has added the words "for drunkenness" in the second. This is reviewing with a vengeance: we have before seen critics garble sentences, in order to convey a wrong or ridiculous meaning; but never, until now, have we seen any thing so unprincipled and audacious, as to omit the first part of a note to destroy its meaning, and write a falsehood in the name of the author, in the second, in order to gratify a base and malignant spirit.* Fare thee well, Reviewer, never again shalt you hear from your most obedient servant,

ROBERT FINLAYSON.

Having toiled through the author's reply, and glanced again at his volume, we may be permitted to add to what we have already said, that his observations are almost every where false, trivial, and puerile, and that his ideas of nature's operations are worthy only of a twelve-year-old girl, or of Sancho Panza, who had the faculty of seeing his Dulcinea by hearsay. Against his reply we have nothing further to say, for after convicting him of so many capital offences, it would be less than useless to proceed with any minor indictment. That he has been fairly heard and as fairly cast, no one who has read his defence will deny; but that the justice of the sentence may be more apparent, we shall narrate a few more of his fooleries.

"*Moisture*, when applied to the *lungs* and *capillaries*, or to the surface of the body, always produces cold, owing to the large quantity of heat it requires to *convert water into vapour!*"

Water *applied* to the *lungs*: and there converted into vapour!—risum teneatis? Again,

"*Moist air* is lighter, and contains less of the vital stimulus than dry air; *hence it follows that the heat of the body is reduced two ways, first by moisture, and secondly by a deficiency of oxygen in the atmosphere, the source of animal heat.*"—p. 33.

Which admirably consorts with the following:—

"*When the air is nearly saturated with humidity, little heat will be, and when fully saturated, none at all, the point of saturation being where the cooling process stops.*"!—p. 50.

"When the air has a great capacity for moisture (that is, when it is dry,) much injury will be sustained by those who are exposed to it, and vice versa (that is, when it is damp, little or no injury will be sustained)."!!—p. 51.

In the first of these extracts he tells us the truth, "that the heat of the body is reduced by moisture," but in the second, as if ashamed of his candour, he contradicts himself, and says, that when air is fully saturated with moisture, no heat will be evaporated, and in the third, that when very dry, it is most injurious, and *vice versa!!!* The fact, as every one knows, is, that though moisture checks perspiration, it is an excellent conductor of heat, and very plentifully abstracts it from the surface of the body. But we are really ashamed of the author, and in the words of our friend Johnson "take leave of him with deep sentiments" of disgust and contempt.

---

* We do positively aver, that our reading of the Doctor's note was perfectly correct; and that he alone is ignorant of the meaning which his words convey, the following extract from his text will abundantly evidence:—

"Inebriety being a crime for which punishment is *very justly awarded* in the navy, the greatest care ought to be taken never to give that [inebriety?] with one hand, for which we are OBLIGED *to inflict* punishment in the other."

Then though *obliged to inflict punishment for drunkenness*, they either did not inflict it, or the author's assertion, that he "never served in a ship with so few drunkards," is equally false and foolish with every thing else he says.

Mr. CRAMPTON's LITHOTOMY NET.

Averse as we are to the idle cabals of controversy, which too often lead to nothing, we have never affected the dignity of silent contempt when the correctness of our assertions has been questioned. Truth, not victory—the advancement of science, not the persecution of those who profess it—and the extermination of medical humbug in all its modifications, being the only objects of our labours, we neither fear nor decline discussion; we therefore challenge the investigation of our statements, and care not whether our opponent be pupil or professor; if he fairly proves us to be in error he shall have our warmest thanks; but when a minion, measuring us by the standard of his own duplicity, and acting on these motives, which he condemns in us, would creep into notice on our back, and stab us at the same time, we shall ever treat him with that disrespect which his good intentions deserve. In the present instance, indeed, silence, however unnecessary a reply may seem to such a petty shuffle, is entirely precluded by the ingenuity of a scribbler, instructed we presume for the purpose, who has had the address, first to convict us of a wilful falsehood, and then to tinge his accusation with verisimilitude, by furnishing a cause for our guilt. Having thus laid us under a double obligation, we shall, without more words, proceed to remove this heavy burthen to the proper owner.

Mr. Francis L'Estrange, the *maker*, as he now informs us, of a nonsensical instrument *invented*, according to the same authority, by his master Mr. Philip Crampton, (what a precious thing to emanate from a union of such talents! *parturiunt montes*, see the plate for the *mouse*,) has published an account of their joint production, and of an operation in which this specimen of the *invention* of Philip, and the *workmanship* of Francis, was used, but differing, in some respect, from a description given by us in a "sketch" of the County Dublin Infirmary. This parody on common sense commences by stating, that "our anxiety to be severe" induced us to loose sight of that accuracy which ought to characterise a medical communication, and in the next sentence it is asserted that our error was the consequence of the place where we sate during the operation. In one period it is insinuated that we misrepresented from improper motives; in another, he acquits us of this crime by imputing it to accident. We should be happy to learn from Mr. Francis which was the true source of our misstatement, "anxiety to be severe," or the "place we occupied" in the theatre, for as the same cause cannot be accidental and designed at the same time, a direct answer to either of these questions must necessarily falsify the other. Leaving him, therefore, to digest this solecism at his leisure, we shall pass on to his numerical refutation, in which he attempts the life of "Erinensis" by four thrusts of his "drill," and to commence with the "first." We did not positively assert that he was the author of the "net," having used a form of expression indefinite in its import, namely, that *we believed*, or understood, that it was invented by him, and if we erred in such a supposition we were not to blame, as he was the author of the report on which our belief was founded; but it seems our faith rested on a very treacherous foundation.

In the second charge it is stated, that the instrument described by us, though lying on the table, was not used, or intended to be used, in this operation. If there were another instrument on the table, more minutely according with the description given by us, it was not seen by us, for our picture was taken, as well as we could, from an original in Mr. Crampton's hands. Every person who has read our account of this instrument must have perceived, that we observed that caution necessary in describing a thing seen at a distance in the hands of another. All we attempted was, to give an idea of the principle of the instrument, acknowledging, in words which could not have been misunderstood, our inability to do more. If Mr. Crampton, however, had done his duty as a receiver of tax upon *pus*, by explaining the construction and imperfections of his foolish instrument to his class before or after the operation, he would have just cause of complaint if it had been wrongly described; but whilst he neglects a duty for which he is paid, he must abide the consequences of the accurate or inaccurate statements of an uninstructed spectator.

"Thirdly," it is asserted, that it required no force to introduce such an instrument as that delineated in the engraving, into the bladder. With respect to the truth of this statement the operator alone can decide, but to us it appeared at the time that either force was required in the introduction of the instrument, or

that an unnecessary delay was made in that stage of the operation, for we assert that the incision was as long plugged up by this ridiculous substitute for a forceps as a Liston or a Cooper would have been extracting the stone altogether. Mr. L'Estrange very ingeniously omits in his imperfect engraving that ludicrous appendage of the instrument, the silken purse, which, had it been represented, would have silenced all cavil on the propriety of using the word "force."

The "fourth" and last item in these charges states, that only one out of this litter of instrumental absurdities was used on the occasion, and that it was retained but one minute in the bladder, in consequence of the handle having separated from the shaft. Without meeting this assertion by a mere denial of its truth, is it probable, we ask Mr. L'Estrange, that Mr. Crampton would have lost so fair an opportunity of trying the merits of the instrument, by using a second when the handle of the first broke? Mr. Crampton believed that the instrument was capable of extracting the stone, or he did not; if he believed that it was sufficient for that purpose, to be consistent he should have persevered in its use; if he did not believe that it was superior to the old forceps, why adopt it in the case at all? So much for the introduction of a second instrument; and with respect to the time it was retained in the bladder, if Mr. L'Estrange had only consulted his chronometer, he would have found that his *minute* was as long as seven or eight; and that if he read our statement without a view of misrepresentation, he would also have learned that we no where asserted that the "net" was for fifteen minutes in the badder; our words being, "that having thus tortured the patient for that length of time, the stone was extracted by the assistance of the old forceps."

We now leave Mr. L'Estrange to enjoy the "responsibility" which he incurred by the publication of his letter. That he has been made a dupe to palliate the errors of another we can readily imagine; but that so shallow an artifice would have been attempted to be imposed on the public, is a matter of surprise to every professional man in Dublin, and none more than to

ERINENSIS.

DR. NUTTALL'S LECTURES.

[*From a Correspondent.*]

DR. NUTTALL'S Classification (to which his Lectures are adapted) of the articles of the Materia Medica, and of all other agents employed in the healing art, the deductions being strictly practical; the means having reference to preternatural activity, or depression, or vitiation of a function or functions, or to undue enlargement, or decrease or disorganization of structure, which embrace all diseases.

CLASS I.

Medicines acting exclusively on the vital functions, inducing nearly uniform determinate salutary effects, in conformity with our intentions, their actions being manifestly vital.

Ord. 1. Vito-secerning; provoking organs to dislodge or evacuate their contents, the secerning capillaries of each respectively being at the same time generally excited to preternatural operation.

Gen. 1. Emetics; operation on the stomach, which they invert. (Vomiting may also be effected by mechanico vital means, viz. by titillation of fauces, or irritation of pneumo-gastric nerves, or by insertion of emetic matter into the circulating system, by injection into veins, or through wounds.) Secretion, various, as mucus, succus gastricus, serous. Spec. 1st. Tonic, as zinc; 2d. Depressing, as antim. ipecac.

2. Cathartics; operation on bowels, quickening their peristaltic movements. Spec. 1. Evacuations watery, mucous, serous, as by salts; 2. Solid or fœcal, by jalap; 3. Action on great, aloes; 4. On small intestines; 5. Tonico-evacuating, rhubarb.

3. Emmenagogues; action on uterus; discharge menstrual.

4. Spermagogues; action on testes; discharge seminous.

5. Diuretics; action on kidneys and bladder, first incited to secrete, second to discharge urine.

6. Diaphoretics; action on cuticular perspirable apparatus; secretion sweat.

7. Expectorants; operation on lungs themselves, or their air tubes; secretion pus or mucus, or muco-purulent matter; dislodgment effected by the active agents of respiration.

8. Mucontics; augmenting mucous secretion from mucous surfaces, or glands in general.

9. Purulentics; provoking purulent secretion and discharge from parts indefinitely.

10. Pulmonitics; augmenting the halitus, or vapoury secretion and discharge from the pulmonary arterial capillaries, ramifying or terminating in the air cells of the lungs, thereby attennating inspissated mucus, or muco-purulent matter, lessening their adhesiveness, consequently favouring their removal or ejection.

11. Sialogogues; augmenting the secretion of saliva from salivary glands.

12. Errhines; augmenting the mucous, or sero-mucous discharge from nasal passages.

13. Epispastics; provoking first a serous, and then a puriform discharge from the skin.

14. Xolotics, or bilitics; augmenting the secretion and flow of bile from the liver.

15. Pancreatics; augmenting the secretion and flow of juice from the pancreas.

16. Cerumintics; augmenting the waxy secretion in the external passages of the ear.

The remedies used for checking, suspending, or removing inordinate discharges, either spontaneously or unwittingly induced in the organs already alluded to, naturally present themselves next in the order of succession of subjects to be considered, and we shall find that all of the ensuing genera of the following order may be laid under contributions to that end, most of them being not less appropriate to the removal of hæmorrhage and dropsies. We shall begin with the genus of astringents, which will afford us an easy introduction to the next genus, viz. tonics, with which it is often closely allied, as well as more remotely with its following associated genera, each being frequently substituted for the rest.

Ord. 2. Vito-non-secerning; to control inordinate evacuations, to give a new direction to other vitiated functional or organic disturbances, to avert disorganization, to reduce or upraise actions as they may present themselves, raised above, or depressed below par.

Gen. 1. Astringents; controlling hæmorrhagies and other discharges, immoderate in quantity, occasionally reducing certain violent actions to their natural standard, then usurping the office of

2. Tonics; (under which certain invigorating gasses and natural constitutions of atmosphere, as applicable to particular conditions of body, together with electricity and galvanism, offer themselves for discussion,) confirming organs or functions in their healthy course, fortifying parts or the whole against morbid or pernicious impressions or actions, from within or without, giving a new direction to actions of an irregular nature, but not depending on an obvious state of the secretions; averting ague fits, &c.; too often, however, incapable of changing or altering certain perverted actions, yielding that power to

3. Alteratives; which induce and establish a salutary change or new series of actions in the secreting capillaries, leaving depressed powers to tonics, to be raised up to their wonted height.

4. Antispasmodics; (under which the depressing gasses will come to be considered,—as well as the equable and genial climate of tropical regions, of certain localities in this island as applicable to certain constitutions,) a property often borrowing from the genus astringents, from that of tonics, and often repaying, but more especially and often encroaching upon or gliding into the one next to be enumerated, forming consequently an intermediate link between them, subverting various morbid, and inducing new not hitherto considered actions, chiefly depending on the state of the nervous system.

5. Soporifics or morphitics or hypnotics, inducing sleep.

6. Anti-dolorifics or anodynes, operating (not by necessity by withdrawing the cause of the morbid condition,) but by their own inherent power of impressing or deadening the sensibility of nerves and other dependencies of the nervous system.

7. Anti-hydropics, or hydrogogues, exciting absorbents to remove effused fluids from interstices and cavities in general, also solid accumulations, without reference to the outlet whence they escape from the body.

8. Anti-narcotics and venenitics from vegetable, animal, mineral, and gaseous kingdoms, averting their deleterious agencies.

9. Anti-phlogistics, such measures of general conduct as tend to lessen general activity or commotion, especially in the sanguiferous and nervous systems.

CLASS II.

Medicines purely chemical in their action, not requiring the co-operation of vital power; their action, and beneficial results, being independent thereof: not respecting the perverted functional or organic movements themselves, but merely their consequences or sequelæ; neutralizing the fluid secreted, rendering it

inert and innocuous, dissolving more concrete inorganic matter.

Ord. 1. Internal.

Gen. 1. Antacids and antacrids select, from the mineral kingdom, exhibited per anum, vaginam et urethram, to absorb vitiated secretion.

2. Vesico-Lithonthriptics injected per vesicam to dissolve calculi.

Ord. 2. External.

Gen. 1. Absorbents general, from vegitable, animal, or mineral world, applied to prevent excoriation or irritation from acrimonious or virulent cuticular, or more deep-seated superficial secretions.

CLASS III.

Remedies acting simply on a mechanical principle, not requiring the interposition of the active powers of life (they being passive) in effecting their object or good.

Ord. 1. Internal.

Gen. 1. Vermifuges; destructive of worms by poisoning them, the alimentary canal, sooner or later, by its own unaided efforts, expelling them; or, by goading, forcing them to seek some other place of refuge out of the body as dolichos pruriens. The anti-vermi-generatives have already been noticed under tonics and alteratives.

Ord. 2. External.

Gen. 1. Anti-animalcules, extracting worms or other animalcule from the subcuticular cellular membrane, by excision, by picking or unravelling, or by medicated applications, as the Chiger, Guinea worm.

2. Against other states of body requiring manual aid. Tapping, arteriotomy, venesection cupping, trepanning, reduction of dislocations, extraction of substances, &c.

CLASS IV.

Chemico-vital, the vital energies being roused into activity, but still allowing a manifest independent chemical action to be in force.

Ord. 1. Internal.

Gen. 1. Oro-lithonthriptics, acting through the medium of the primæ viæ, correcting vitiated secretion, or perverted actions advancing in the chymo-chylio sanguineo assimilating functions, at the same time, however, digesting vesical calculi, or retarding their growth, or changing their constitution.

2. Antalkalines correcting alkalinity and s linity, when either exists in the blood from ischuria renalis or uretralis, or imperfect, limpid secretion of urine, of those principles already formed in the blood, or therein existing in an elementary state ready for combination in and elimination from the kidneys, when disposed to act genially.

3. Refrigerents, inducing a reduction of heat by abstraction, thereby allaying preternatural irritability, morbid sensibility, or inordinate nervous commotion.

4. Antiseptics, preventing the blood from running into putrefaction, or dissolution, or discrasis, a septic tendency proved under ischuria renalis, or entire suppression of the urinary secretion, either naturally or artificially induced, as proved by observations made on such existing circumstances, and in sea scurvy, and under poisoning from certain deleterious agents. (The genus antacids, as respects the blood, cannot be admitted, no observations having as yet established the anciently suspected acidity of that fluid, though secretions when perverted are often acid or acrid,) as wholesome food, &c.

5. Injections to induce various results per anum, vaginam et vesicam. Species, 1. Cold; 2. Warm; 3. Medicated.

6. Smoking, as a preventive, or assuager of disease, tobacco, digitalis, &c.

Ord. 2. External.

Gen. 1. Escharotics; provoking decomposition of, or establishing a destructive process in the softer animal solids, entailing a scab or purulent secretion.

2. Cold affusion or bath; range from 33 to 60 degrees, subducting animal heat preternaturally excited and evolved chiefly by evaporation, subverting the disposition to its inordinate generation, constringing the vessels and muscular tissue at large, judiciously or seasonably applied, exciting powerful reaction. Species, 1. General; 2. Partial.

3. Warm affusion or bath; heat ranging from 90 to 98 degrees, effect, tranquillizing irritable nerves, senses and sensorium, relaxing or softening a tense cuticular surface, removing spasm from rigid muscular fibres, determining or encouraging the flow of blood from the centre to the circumference, thus relieving congested or oppressed parts. Species, 1. Universal; 2. Local; 3. Medicated or emollient.

4. Hot bath, ranging from 98 to 116 degrees, highly stimulating to the sanguiferous and nervous systems, heat engendering for a longer or shorter time, or exhausting according to the length of period of immersion. Species, 1. General; 2. Partial.

5. Steam bath, ranging from 100 to 130

degrees, action similar to the foregoing genus, powerfully exciting and awakening excessive temporary or more lasting general irritability, or inducing exhaustion if the application be protracted. Species, 1. General; 2. Local; 3. Medicated.

6. Transition bath; powerfully invigorating; reaction inconceivably strong and permanent; skin smokes, and becomes florid, and nervous system for some time continues, often for an hour, insensible to cold, though body unclad.

7. Electricity, galvanism. The natural and artificial gases.

CLASS V.

Mechanico-vital; the vital powers directing the mechanical agency.

Ord. 1. Internal.

Gen. 1. Demulcents; which have respect to passages, and their respective mucous surfaces, lubricating, lining, sheathing, or defending them from, or interposing betwixt, menaced superficies, and the menacing matter, or acrimony secreted.

2. Attenuants, diluents; bearing reference to the circulating fluids of the absorbent or sanguiferous vessels; increasing the serosity of the blood beyond the crassamentum, viz. watery matter, or succulent vegetables.

3. Inspissants; such as render the blood viscid, firm, and dense, causing the cruor to preponderate over the serum, viz. solid food, as the farinacea, meat, especially the flesh of full grown animals.

Ord. 2. External superficial.

1. Manual acts; species 1, Dry, including friction, kneading, chompooing, extension, &c.—2nd, Moist with simple oil, or medicated matters.

2. Rubefaciants, such stimuli as excite high local action or inflammation, without causing epidermoid separation, as stinging nettles.

3. Cataplasmata; poultices of different kinds, applied with various views, to excite solution of continuity, or to perform some specific office in a part abraded or not, as of linseed, bread and milk, conium, mustard or garlic, or one more general.

These two last genera have in part been considered under one or other of the foregoing heads; but sufficient reasons warrant their coming under a specific head, and the same observation extends to a few others.

WESTMINSTER MEDICAL SOCIETY.

This society resumed its meetings on Saturday the 7th inst., after an adjournment of three weeks, which took place with a view, it was stated, of enabling the members to partake of the "good things peculiar to the season;" as if forsooth the *good things* peculiar to the society were not amply sufficient for such "sage philosophers." De gustibus nil disputandum. But depraved and sensual indeed must be the appetite that could not relish the "*intellectual* banquet" provided for this meeting. It was truly "a feast of reason;" and even the scraps we stole from thence will form a "dainty dish" wherewithal to entertain our numerous friends.

The subject of debate was Iritis, on which disease a Mr. Hunt had *kindly* undertaken to read an "Essay;" we say kindly, for of late there has been a scarcity of "Essayists," on which emergencies Mr. Hunt (to his honour be it said) volunteers his services, nothing comes amiss to him; it is not only iritis, but "omne quod exit in itis." "The curse of writing is an endless itch;" and, alas! so is the curse of speaking.

The reader or speaker (for it was an alternate display of reading and speaking) commenced with great diffidence. He said that "he had nothing new to advance," and that his only object in bringing forward the subject was in order "to *take* the *sense* of the meeting." (The honourable member did not state whether for his own private use.) After these preliminaries, with much booing and scraping to boot, Mr. Hunt proceeded to speak of the anatomy of the eye, with which he appeared to be particularly conversant; for he spoke with much confidence of the *serous* membranes lining the inside of the eye, and next took a rapid survey of the symptoms which distinguish iritis, and the proper treatment thereof. He said, that the eye had a "fatty appearance" in this disease, and that therewas "redness and vascularity." The appearance of syphilitic iritis, he said, was different from the iritis which proceeded from common causes,—that "Mercury advanced absorption," and "opium allayed anguish," and, therefore, a combination of calomel and opium was highly useful. He (the Essayist) could not conceive that belladonna, which he recommended to be applied around the eye, acted by producing paralysis of

the iris, but thought that the dilatation of the pupil arose from the contraction of the radiated fibres; and finally, having "thanked the indulgence of the society," and "apologized for paucity of information," the learned member sat down.

A discussion ensued, which became so general that we cannot give the opinions of all the speakers on this occasion. Suffice it to say, that Mr. Hunt was "upon his legs" six times before the conclusion of the meeting, and Dr. Copland once; that Mr. North said something about the continental practice, and on which, by the bye, we learn from a puff in the *Morning Post*, that he is writing a book, which "shortly will be published;" and Dr. Locock related a case which he *particularly* remembered, *quia* it occurred in a "very interesting young female,"—and thus terminated, for this evening, the "sayings and doings" of the Westminster Medical Society.

Saturday, January 14.

The chair was taken by Mr. Gascoyne, who apologized for the absence of Mr. Rose, upon whom the duty of President for the evening devolved. The evening was occupied with the relation of cases by different members of the Society, and the discussions which ensued thereupon.

Dr. Milligan related a case of "*morbus cæruleus*" in an infant, which at the present time is under his care; he wished to know if the experience of any member present could lead to the suggestion of a plan of treatment likely to be of utility in such a case. The Doctor long "paused for a reply," when at length Mr. Hunt arose with a view, as we supposed, of recommending a plan of treatment which would cure the "organic disease of the heart" alluded to by Dr. Milligan. Mr. Hunt's object, however, in rising to address the Society, was the relation of several cases of *delirium tremens*, which have fallen under his care. Mr. Hunt's treatment of this disease consists in the exhibition of *large doses of henbane*, which he stated he had found very beneficial in allaying extreme irritation and restlessness, the distinguishing features of this disease.

Dr. Locock wished to know, what was the immediate pathological condition on which this disease depended? and what were the appearances presented on examination after death in fatal cases of this disease?

To Dr. Locock's questions, no satisfactory reply was given.

Dr. Somerville next called the attention of the Society to the subject of *punctured wounds* received during dissection, or post-mortem examinations. He said that he had seen a case of late, in which no wound was received at the time of making the examination of a body, yet it was followed by the same train of symptoms that ensued in another case, in which a wound was inflicted at the time of conducting the examination of the same body. From this circumstance, he (Dr. Somerville) was inclined to believe, that the simple contact of the morbific virus was equally injurious with inoculating the person by means of an instrument used in dissection or examination. In reply to a question from the Chairman, Dr. Somerville said that there might have been some abrasion or wound on the hand of the first person he had alluded to, but on this point he was not certain.

Dr. Somerville's want of information on this particular, is a circumstance to be regretted, because the main question hinged (in our estimation) on the fact of a wound being present when the hand was brought into contact with the supposed virus. The discussion which ensued on the treatment of punctured wounds, proved that there is as much "glorious uncertainty" in physic as in law, that medicine is now as in the days of Celsus, "Ars conjecturalis." Whilst, on the one hand, Mr. Allen, a member of the Society, contended for the strictly antiphlogistic mode of treatment, Mr. John Shaw, on the other, thought "there was nothing like" beef steaks and porter, with large doses of opium. We understood Mr. Shaw to say, that he had not seen one case of wound received during dissection prove fatal. His situation had afforded him opportunities of seeing many cases of this description, but they all terminated favourably under the tonic plan of treatment. He knew that many objections were raised to this mode of treatment, indeed Dr. Johnson, who accompanied him into the room this evening, had promised him a "cut-up" for his porter and beef steaks.

In the course of the remainder of the debate, which became very general, a question arose as to whether injurious consequences more especially occurred from wounds received in the examinations of bodies dying of certain diseases; for instance, puerperal fever, peritoneal inflammation.

A member of the Society remarked, that in some cases the whole body after death underwent the most rapid decomposition in the space of a few hours, and thought the virulence of the matter attributable to this cause.

It was ably contended by Dr. Macleod, that a reference to the different cases would prove that in general it was from the wounds received in the examination of recent cases that injurious effects resulted. Dr. Thompson, of Edinburgh, taught, that the danger from wounds received during dissection, was inversely to the length of time which the body submitted to examination, had been kept, and this opinion he (Dr. Macleod) considered as correct.

Although nothing novel was elicited, and the discussion led to much conflicting evidence, especially as regards the plan of treatment proper to be pursued, yet, upon the whole, the debate was interesting; for it is a *personal* question—one that comes home to the bosom of us all. How many a bright ornament of science has been arrested in his career of glory by the untimely, ruthless hand of death, whilst ardent in the pursuit of knowledge. Not a season elapses but a friend, a fellow-student, or brother practitioner, falls a victim to wounds received during dissection, or in conducting post-mortem examinations.

MEETING OF THE STUDENTS AT ST. BARTHOLOMEW'S HOSPITAL.

A Meeting of the Students of this Hospital took place in the Anatomical Theatre, on Wednesday se'nnight, for the purpose of taking into consideration the propriety of requesting the surgeons to allow the name, age, disease, and principal treatment of every patient under their care, to be affixed to a convenient part of the bed. It is scarcely necessary to observe, the most intense interest was excited in consequence. Immediately after the afternoon lecture, Mr. Skey was called to the chair, when the following resolutions, addressed to the surgeons, (which had been previously drawn up by one of the students, Mr. Turley), were proposed and carried unanimously.

1st. That for the benefit of the students and the economy of your time, the name, age, disease, and treatment of each patient be posted on some conspicuous part of his bed.

2d. That all accidents admitted, be registered every day in a book kept for the purpose in each accident ward.

3d. That a notice of all operations to be performed should be pasted on the board in the Anatomical Theatre.

Here some desultory conversation arose previous to putting the fourth and last resolution, and which, indeed, was not embodied with the foregoing; it was as to the mode of conducting post-mortem examinations, and the shameful extortion of sixpence from every pupil entering the dead house.

Mr. Turley suggested the following proposition: "That fully impressed with the great importance of post-mortem examinations in the detection of the nature and seat of diseases, you will be pleased to cause due notice to be given of such examination, and also direct it to take place at some convenient hour."

Mr. Gordon directly rose, and said he could not allow that resolution to pass, without suggesting, as an amendment, the great necessity there was for complaining of the present fine levied on each pupil entering the dead house; it was a shameful and an abominable imposition, it was a tax of an infamous kind, and ought to be at once done away with. (Great applause.)

Mr. Wormald, one of the demonstrators, observed, that he had made every inquiry as to the manner in which that fee originated, and from what he could learn, it did not appear the medical officers had any control over it, but it rested entirely with the Governors; and the regulations adopted by them generally were, that before any body should be examined, the physician or surgeon under whose care the patient had been, should first sign a book kept for the purpose: he consequently considered it would be useless to make any mention of it in the present petition.

It was immediately remarked by Mr. Spry, this could form no objection, since it only required that the resolution should be embodied in a separate petition, and be presented to the Governors. This met the views of Mr. Elliot, who seconded the proposition. The Chairman did not think proper, however, to take the sense of the meeting on it. After a rather prolonged discussion the following resolution was proposed and carried unanimously:

4th. That you will please to cause due notice of every post-mortem examination to be given, and will also assist in correcting the present abuses of the dead house.

A pupil, whose name we could not catch, was about making some pertinent remarks on the present abuses of the Hospital, when he was told by the *worthy chairman* to hold his tongue. Previous

to this, Mr. Elliott insisted that a question which Mr. Spry had proposed, should be put, as it had been duly seconded; but it was not until considerable dissatisfaction had been expressed, that the Chairman consented to do so. Indeed we never saw a person conduct himself in such an unbecoming manner before; and as we believe Mr. Skey is anxious to ingratiate himself with the pupils, we would strongly advise him never again to take the chair. This advice, however, might perhaps be saved, for we very much question whether he will ever again have such an honour conferred on him.

The petition has been since given to Mr. Stanley, with a request that he will present it to the surgeons. We are happy to say, it has met with the entire concurrence of Mr. Lawrence, and notice of the operations which were performed on Saturday, was duly posted in the Anatomical Theatre.

ROYAL COLLEGE OF SURGEONS IN LONDON.

We can pity even those whom we despise. Compassion is not incompatible with contempt; and, however ill we may think of those whom a luckless and injurious charter has converted into legislators and tyrants, who are altogether incompetent to discharge those functions which their station requires, whose intellectual barrenness is proverbial, and whose avarice has assumed the character of theft: with the profoundest scorn of such beings, we will, nevertheless, tranquillize their agitations, and dissipate, at least, a portion of their fears. Rest then, perturbed spirits! Be assured that the hand of mercy will be extended towards you; charity triumphs over justice, and you *will not* be hanged! Neither will you be *transported* from the scene of your legislatorial iniquities farther than to your own dwellings, or to some other receptacles of the idiotic and [illegible]. Already are the Examiners of the College, to the inexpressible regret of the majority of the profession, in a state of senescence and debility; long continued fear, therefore, operating on such enfeebled beings, might be productive of the most lamentable consequences, and occasion tragical events, which the members of the College, with the most amiable forgetfulness, would deeply deplore. Having heard of the dreadful apprehensions which were excited in the minds (query, minds?) of the College junta, from the announcement which we last week gave of the projected meeting of the surgical profession, we have been anxious to acquaint them of the charitable disposition of those whom they have so long persecuted and insulted, and to assure them that they will not be visited with the extreme penalties of the law.

As far as may be compatible with public justice, we conceive that the *remote* conduct of those who have held the reins of government, at the College, should be buried in oblivion; at all events, let us not in this instance adopt the generous scriptural axiom, of "visiting the sins of the fathers upon the children." Let us not then retrograde, and publish to the world the misdeeds of their predecessors, nor even refer to a distant period in the history of the government of the *present powers*, with a view to discover data whereon we may rest our claims to reform; indeed a detailed history of insult, persecution, mal-administration, and selfishness, if exhibited against the Governors of the College, would detract as much, if not more, from the high-mindedness and independence of the *members*, who have for so long a period passively submitted to such an extended catalogue of insults and injuries, than it would add to the odium which is already attached to their rulers.—The motto of the College has been, aggrandisement and insult—that of the members, non-resistance and passive obe-

dience. A retrospect, therefore, of the past proceedings of the College and the slavish submission of the members, might detract from the liberal and scientific character of the latter, whilst it is impossible that it could add disgrace to the former. Whilst viewing the deeds of the College with a critical eye, we should bear in mind that their laws have been enacted under the authority and protection of a charter; a charter so exceedingly objectionable, from the unlimited and irresponsible power it gives to a few individuals, that it ought not to be tolerated in civilized society; even supposing that no injustice had ever been perpetrated under its indemnifying influence,—supposing that the conduct of the College had been liberal and patriotic even to prodigality,—supposing that they were men of the first talents and acquirements, and whose united energies had been unremittingly devoted to the advancement of surgical science; still these, opposed to public policy, would not have furnished even the shadow of a pretext for the continuance of the present College charter. What shall we say of it then, what ought to be its fate, when we perceive that under its pernicious sanction it has permitted a junta of most unworthy men to enact laws for their own benefit, to the injury of their fellow men,—to frustrate the beneficial effects of honourable and emulative competition,—to visit on talent the curse of exclusion, and who consider that the possession of genius is the most heinous of crimes,—who, to suit their own purposes, have decreed that what is knowledge in France, is humbug here, —that Science in Germany is atheism in England,—and that a knowledge of anatomy can only be acquired by Englishmen from the 1st of October to the 30th of May, —who treat like menials those by whom they are paid,—who deny the only legitimate supporters of the College the *very great privilege* of entering their temple at the same door with themselves,—who exclude their superiors by birth, talent, and education, from a Museum purchased by Parliament for the benefit of the *members* and the public,—who sometimes, however, in the overflowing of their condescension, do for a few minutes permit a few of the insulted members to enter it, and then with a "brazen tongue" insolently announce that they must depart? What, we again ask, ought to be the fate of this same Charter, if it has been the cause of, or if it has protected such deeds as these? Yet that it has done both, we need not acquaint the profession; the course, therefore, which we ought to pursue, is clear, and equally clear is the period whence we should date our complaint, viz. at the time of passing that bye-law which obliges applicants for the diploma to produce certificates of attendance on WINTER COURSES of LECTURES. We need not go farther back; the history of the College from that epoch will furnish ample abuses whereon we may ground our arguments for reform, and may be thus briefly stated:—

The compulsatory production of certificates of attendance on WINTER COURSES of LECTURES:

The refusal to receive certificates of attendance on Lectures, unless such Lectures have been delivered by the *Surgeons of the London Hospitals, or their friends:*

The refusal to receive certificates of attendance on the *Surgical Practice of the Provincial Hospitals and Infirmaries*, as those of Bristol, Manchester, Leeds, Birmingham, Exeter, &c. &c., many of which are much better conducted than those of this metropolis, and afford better opportunities of acquiring surgical knowledge:

The exclusion of the Members from the Museum, except at certain brief periods:

The shameful neglect in not printing a descriptive catalogue of the contents of the Museum:

The refusal to allow members to make casts, or take drawings of the various preparations in the Museum, whereby its utility is exceedingly abridged, if not altogether destroyed:

Omitting to form a library to which the Members might have access:

The insult which they invariably offer to the Members who have so liberally contributed to their support in compelling them to enter the College by the *menial's* entrance in Portugal-street, whilst themselves and their *hospital colleagues* are as uniformly permitted to *ornament* the aristocratic portals in Lincoln's-inn-fields.

The highly objectionable practice of electing each other, by which corrupt mode of procedure, partiality of the most profligate description has been exercised, by which individuals have been elected to the Council and Court of Examiners of the College, who are entitled to no other name than that of surgical idiots; who in Hospital practice have notoriously proved themselves to be incompetent to execute, in a proper manner, the most simple surgical operations; men who, it is equally notorious, have, from their extreme ignorance and inanity in many instances, destroyed the lives of their suffering fellow creatures; who have tied the *femoral sheath* instead of the femoral *artery*; who have cut persons for the stone, when no stone existed; who have punctured the bladder above the pubes, with a view to relieve from the effects of extravasated urine, in a case where the *urethra was ruptured*, who, in performing the operation of trephining, have perforated the dura mater, who, in the operation of lithotomy, have thrust the gorget between the bladder and the rectum, and who, horrible to relate, have cut away the contents of an inguinal hernia, (*intestine, sac, and omentum,*) mistaken for an encysted tumour:

And finally, it is not the least accusation against the College, that they have omitted to interfere in an efficient and spirited manner with the legislature, with a view to obtain an abrogation of those impolitic laws which so materially obstruct the practice of anatomical dissections.

Such are the principal grounds of complaint which we have to advance, and certainly, if duly considered, are more than sufficient to produce in the minds of the legislature, an opinion favourable to reform.

In addition to the above, many abuses of less importance might be stated; yet there is one, perhaps, to which we ought to have given a prior place, and in which the culpable negligence of the College has brought great disgrace on the entire body of the profession; we allude to its allowing the names of the advertising and obscene quacks of this metropolis to remain on the College lists in conjunction with those of the respectable members. If a member of the Established Church commit a notorious wrong, is he not deprived of his gown? If an attorney in the practice of his profession does an act which is deemed derogatory to its character, does not the Court strike his name from the Rolls? And is it not equally essential in our profession that there should be an official line drawn between those who conduct themselves honourably, and those who, on the other hand, are in the constant habit of abusing the public eye with obscenity and false pretensions? For our parts, we think the College has been guilty of great neglect in this respect, and that the members have ample cause of complaint.

Having thus pointed out the most prominent abuses of the College, and the injurious tendency of the charter, the ques-

tion naturally arises, how are these glaring evils to be remedied? the object for which the members will meet on Saturday the 11th of the ensuing month.* The best course we conceive that the Meeting can adopt is to point out to the legislature the defective and corrupt state of the College as above described, upon which a petition should be founded and presented to Parliament, praying for the institution of a Committee to inquire into the present condition of the Royal College of Surgeons in London. Of course care will be taken that the members of the parliamentary committee shall be supplied with evidence to prove the truth of the allegations contained in the petition; this being done and the report of the committee obtained, should that report be favourable to a change of the College charter, men, and measures, the Members ought again publicly to assemble, and petition for a *new charter*, the chief provision of which should be, *that all the officers of the College be annually elected to their respective offices by the Members*. This proposition we threw out for the consideration of the profession on the 1st of May 1824, immediately after the appearance of one of the detestable bye-laws. A lapse of nearly two years has not induced us to alter our opinion of the propriety of this measure; it is a remedy simple in its nature, of very easy application, and most unquestionably will produce a radical cure of all the diseases with which the college is afflicted, and of all the evils with which it at present contaminates society.

* The place of meeting will be duly announced.

MUSEUM AT ST. THOMAS'S HOSPITAL.

At the conclusion of the article under this head in our last Number, we promised that we would on the present occasion, exhibit the nature of Mr. Green's "opposition" to the election of Mr. South, and likewise expose the artifice by which he had attempted to make it appear that Sir Astley Cooper was in possession, for 18 months, of the thousand pounds paid by Mr. Green for a moiety of the museum. The explanation of the latter circumstance we shall defer until next week, and shall merely, on the present occasion, confine ourselves to Mr. Green's conduct, relative to the part he acted in the election of Mr. South. Even here we will be as brief as possible, as we have no desire, farther than is consistent with justice, to darken our pages with the great "Surgical Eclipse," or with any circumstances which relate to him.

Mr. Green repeatedly urges in vindication of his conduct, his long continued opposition to the election of Mr. South. At page 27 of his pamphlet, he says "I actually did refuse to lecture with Mr. South."

Again at page 28, "And I continued my refusal, and lectured alone, day after day, harrassed by the importunities of the Treasurer of the Hospital, the meeting of the pupils, and the disturbance of the business of the school, till Mr. B. Cooper's conduct, and the confirmation of Mr. South's appointment by the committee, left me no further choice."

At page 29, will be found the following:

"But as the above measures, proposed by Mr. Key and Mr. B. Cooper, do not furnish any grounds for doubting that I took every honourable step to insure Mr. B. Cooper's election, perhaps their 'strongest reason' for doubt is derived from Mr. Harrison's assertion: 'The Committee of St. Thomas's Hospital

had been informed that Mr. Cline had considered Mr. South the most eligible, and Mr. Green confirmed the statement.' How far this statement is warranted by facts, may be inferred from the positive assurance, expressed in writing, of the Treasurer of St. Thomas's Hospital: 'I have to assure you that neither Mr. Cline nor yourself did recommend Mr. South to me as the most eligible candidate for the office of anatomical lecturer.'"

And at page 33, will be found the following:

"If any part of my conduct require explanation, it is that of having carried my opposition to Mr. South to a point, which that gentleman can only excuse by giving me credit for acting upon the strictest principles of honour."

We now beg to call the attention of our readers to the *proof* of Mr. Green's opposition to Mr. South, that is, we desire them to compare the following letter addressed, by Mr. Green, to the Treasurer of St. Thomas's Hospital, with the above passages and see whether there is any *similarity* of sentiment to be found in them.

"Dear Sir,

In compliance with your request, I beg to state that Mr. South has been most assiduous and zealous in acquiring a knowledge of his profession, and has especially devoted much time and attention to anatomical pursuits. He has an accurate knowledge of the subject, and is, in my opinion, an able practical anatomist.

"I regret that I cannot furnish you with information on his other qualifications for a public lecturer, as I have had no opportunity of ascertaining whether he has the power of conveying the requisite information perspicuously, and in a manner calculated to excite the interest and attention of his auditors, but I may add, that before Sir Astley Cooper's resignation, his ability as a Demonstrator had not been impugned.

I am, &c.

Joseph Henry Green."

After this is it necessary that another word should be said of Mr. Green's conduct in this part of the transaction? Have we not again succeeded in dispelling the darkness of the huge "Eclipse"? What, after this, are we to think of Mr. Green's sincerity? In all the contradictions we have ever met with in the writings and statements of controversialists, we have never seen any thing equal to the above. Let us now call attention to Mr. Green's remarks in reference to the the above letter:

"These opinions (that is, those contained in the letter,) were uniformly expressed, and I know of no reason for altering what was then my belief, except that Mr. South's qualifications for a public lecturer have since received the testimony of the satisfaction of his pupils;" a little lower down we find "Thus my own language, and the assurance of the Treasurer of St. Thomas's, can leave no doubt that Mr. Cline and Mr. Green did not recommend Mr. South as the most eligible candidate."

Thus Mr. Green does not know of any reason for *altering his belief* of Mr. South's merits expressed in his letter, except it be, that Mr. South's qualifications have received the testimony of the satisfaction of his pupils, the inference, therefore is, that Mr. Green considers his students to be a class of "Wrongheads," and that the accuracy of a fact is always to be found in direct opposition to their opinion. Having, we think, pretty clearly illustrated Mr. Green's duplicity by the above letter and the *aptitude* of his comments, we shall take our leave of him with a promise to explain the money transaction in our ensuing number.

GUY'S HOSPITAL.

The physicians of this establishment during the present season, have been guilty of very illiberal conduct towards those students who have entered to the *Medical Practice*. A clinical ward has been established, in which are placed the whole of the most important cases, and to see these, the pupils are compelled to pay an additional guinea. This abuse calls for the interference of Mr. Harrison.

To the Editor of THE LANCET.

SIR,—I trust I do not intrude too much in offering a few lines in reply to a letter inserted in a late number, bearing the signature "A Pupil of the Middlesex Hospital."

I, like your correspondent "Impartiality," know not Mr. Shaw, and shall therefore probably fall under the lash of some Middlesex Pupil; but no matter, I care not. Honi soit, &c. I am of opinion that every medical man must and does feel the deepest sympathy for Mr. S. as it regards the result of the operation, and I am equally of opinion that every man of honour, whether medical or non-medical, must and will entertain the utmost detestation of the detestable feelings evinced by the Middlesex Pupil, be he who he may.

The letter of the Pupil teems with assertions, false as they are malicious, and through the medium of your valuable publication, I would ask him the following questions; justice demands their insertion; your boasted impartiality will not deny it.

I would ask, 1st. Who were the anatomists of the different schools?

2dly. How is the statement of the operation in your publication *authenticated beyond the possibility of doubt?*

3dly. I would ask, What proofs have we that the operation was improperly performed?

4thly. I would ask, Who is that man whose opinion can be relied on, and who, having seen the preparation, has demonstrated that the vessels were *not* unusually distributed?

A distinct and unequivocal answer to each of these questions, will, Mr. Editor, oblige the profession, and your

Sincere well-wisher,

CACAFOGO.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Operation of Lithotomy—Division of the Artery of the Bulb.

On Tuesday, December 27, Mr. Key performed the operation of lithotomy on a boy, about seven years of age. The operation was accomplished with that confidence and dexterity which so distinguish Mr. Key as a lithotomist. He did not "*go to work* with anxious feelings," as Mr. C. Bell *elegantly* expresses it. The first incision was through the integuments, laying bare the fascia of the perineum; the second incision divided this fascia with the muscles, and immediately a large flow of blood was seen issuing per saltum from an artery, on the side of the lower part of the bulb. Mr. Key turned round and addressed the class with perfect *sang froid*; meanwhile the artery was bleeding. "Gentlemen," said he, "I am glad to have an opportunity of showing you the artery of the bulb, which is *sometimes* divided in performing this operation. I shall now secure this artery." The bleeding vessel was secured, and the operation was speedily completed. The calculus was of about a drachm in weight, its chemical nature we did not learn; it appeared very rough externally. There was no further hæmorrhage from the wound, at least not more than the usual oozing which continues for some time after the operation.

On Friday (three days after the operation) the child complained of much pain and tenderness over the abdomen, but more especially in the pubic region. The pulse was very quick, and also of a character which denoted much irritation. The bowels were well evacuated; twelve leeches were applied to the abdomen, and afterwards fomentations.

31. Much the same; no *further depletion ordered.* The tenderness of the abdomen, and quickness of the pulse on Sunday (Jan. 1) became highly alarming, and there was now much anxiety of countenance. A blister was ordered to be applied to the abdomen, and a powder composed of calomel 1½ grain, and opium 1 grain, to be taken every four hours. The symptoms, however, did not yield to the measures employed, and the poor child died on Monday evening, being the sixth day after the operation.

Post-mortem Examination.

The examination of the body by no means satisfactorily accounted for the death of the child. From the symptoms manifested during life, it was to be expected that evidence of acute peritoneal inflammation having prevailed, would be present, but such was not the case. There was only slight serous effusion into the abdomen, and increased vascularity of the peritoneum covering the bladder and lower part of the abdomen, and this in fact was the only morbid appearance that could be detected. The mucous surface of the intestines presented a healthy ap-

pearance, but in the small intestines, a large quantity of worms (lumbrici teres) were found, which, although they might act as a distant source of irritation, could have no direct influence over the fatal issue of this case.

Neither the thorax, head, nor spine, was examined; consequently the examination must be considered as very superficial.

Case of Permanent Stricture.

T. I., a man of colour, was admitted into Guy's Hospital on December 14, under the care of Mr. B. Cooper, with a permanent stricture in the urethra, which was ascertained to be at the anterior part of the membranous portion; there was also considerable enlargement of the prostate gland. The usual treatment employed in these cases was had recourse to, namely, the introduction of bougies from time to time.

On Tuesday noon, January 3, Mr. B. Cooper introduced a prostatic catheter, and drew off a quantity of urine, which was not tinged with blood. In the evening of the same day, the attention of the assistant surgeon was directed to the patient in consequence of hæmorrhage from the urethra, which came on shortly after the introduction of the catheter. At this time the patient was complaining of great pain about the neck of the bladder, and he was exceedingly restless. A dose of opium was administered to him, and he was directed to be kept cool.

The hæmorrhage did not cease until the following morning, (Wednesday,) and even then he had frequent desire to make water, which passed mixed with dark clots of blood.

On Thursday the patient was seen by Mr. Cooper; he was very restless, complaining of much pain and irritation about the neck of the bladder, and still frequently passing his urine mingled with blood. There was slight swelling and tenderness immediately above the pubis. Mr. Cooper directed the patient to be placed in the warm bath, and calomel with opium to be given; the warm bath afforded temporary relief.

On Friday we found the patient evidently sinking; he lingered, however, until early on the following morning, when he died.

Post-mortem Examination.

There was an abscess at the lower part of the recti muscles, which contained offensive dark matter, similar to that which in general forms from extravasation of urine; it had not, however, the urinous smell. On examining the bladder, it was found that the point of the catheter had been pushed completely through the upper part of the prostatic portion of the urethra; the mischief was probably occasioned by hastily depressing the handle of the catheter.

Operation for Popliteal Aneurism.

Mr. Key performed this operation, on Tuesday last, on a young man. The aneurismal swelling was very small, and indeed had not existed more than a month. The patient attributed its formation to over-exertion in running. There were no particular or unusual circumstances attendant upon the performance of this operation, and the patient is doing well

---

ST. THOMAS'S HOSPITAL.

Case of Hydrocele treated as Strangulated Hernia under the direction of Joseph Henry Green!

On Thursday afternoon a male child, about nineteen months of age, was brought to the Hospital, on account of a swelling on the left side of the Scrotum.

The mother (who accompanied the child) stated that a small swelling had existed for several weeks, but that in consequence of a fall about three days previously, it had much increased in size, and had since then become painful. There was a *fluctuating pyramidal tumour* extending some way up the cord; the testicle was distinguishable at the back part of the swelling and felt much enlarged; there was also a slight redness of the Scrotum with tenderness upon pressure. There was no vomiting nor tenderness of the abdomen, nor increased quickness of pulse. Mr. Travers was the surgeon of the week, but not being at the Hospital, Mr. J. H. Green was requested to give an opinion on this *anomalous case;* on visiting the patient, he immediately said—"*This is Hernia; put the child in the warm bath, take some blood from the arm, and send for Mr. Travers.*" These directions were complied with—the soaking and kneading process was employed for some time, and a small quantity of blood was abstracted from the infant's arm; the tumour, however, (strange to say) did not yield. In the mean time, the messenger dispatched for Mr. Travers

had returned with the intelligence that that gentleman was from home, and therefore the attendance of Mr. Tyrrell was requested.

At this period a considerable number of pupils had assembled, on the belief of Mr. J. H. Green's opinion that it was strangulated hernia, and would probably require an operation. Mr. Tyrrell examined the patient, and Mr. Callaway was also present, both these gentlemen were immediately satisfied that it was not a case of hernia, but of hydrocele, and *on applying a light the transparency of the swelling was very evident!!* This was a precaution we had previously adopted, and therefore the result did not surprise us. So much for the "tactus eruditus" of a lecturer on surgery, a Hospital surgeon, and a professor of the Royal College of Surgeons, &c. &c., and to be outdone too by Tyrrell, Oh! that was the "unkindest cut of all."

ST. BARTHOLOMEW'S HOSPITAL.

Case of diseased Bursa Mucosa of the left Knee Joint.

Ann Bible, aged 42, the mother of four children, was admitted on the 17th of November, under the care of Mr. Lawrence, with an enlarged bursa, situated on the front of the left knee joint. At the time of her admission she stated, that about twelve months ago her attention was first attracted by two small circumscribed swellings appearing on the knees; some slight pain attended these swellings; but she was quite capable of attending to her domestic concerns. They continued gradually to enlarge, till one day, about seven months since, whilst walking through the street, her patten-iron broke, and falling she cut her right knee, and it bled considerably.

After the occurrence of this accident, the tumour on this knee began to enlarge rapidly, and in July last it caused her so much uneasiness that she came to the Hospital, and was placed under the care of Mr. Earle, who subsequently opened it, and by the application of poultices, &c., in six weeks it got well. The tumour on the left knee, which had hitherto continued stationary since the fall, now became a little painful, and she was, in consequence, made an out-patient.

Various means were resorted to, to discuss it, but it continued gradually increasing, and a few days previous to her admission a blister was applied over the knee; this produced considerable irritation in the part, and it was necessary to heal it immediately. The tumour was subsequently punctured in the out-patient's room, but a slight discharge of blood only took place. On the day of her admission she was directed to take a dose of aperient medicine; to have poultices applied to the part, and to be on milk diet.

23. The redness of the part is diminished, and the pain is not so acute. The tumour has now the appearance of a large circumscribed swelling, immediately over the patella, somewhat of the size of a large orange, very hard and painful. The surrounding integuments continue much inflamed and tense. A director was introduced to the extent of about three inches, by Mr. Lawrence, through the orifice, which had been made by the abscess lancet at the base of the tumour; a bistoury was then passed down on the groove of the director, through the skin and condensed coat of the bursa, and by cutting it out, an oblique section was made nearly to its whole extent. An opportunity was now afforded of examining the nature and contents of the bursa: its coat was found to be exceedingly dense and thick, of an apparently fibro-cartilaginous texture, and from its consistence and appearance it was aptly compared, by Mr. Lawrence, to *sole leather*. Within the bursa was found a quantity of thick, semitransparent, gelatinous secretion. An incision was now made, at right angles, with the other, and a poultice ordered to be kept constantly applied. The operation was attended with the most excruciating pain, and the woman nearly fainted in consequence.

24. On removing the poultice this morning, we find the wound looks favourably. She has had some refreshing sleep through the night; the pulse is natural and tongue moist.

25. Says she feels much easier; complains of no pain now, and has an inclination for food. The edges of the wound have receded widely apart, the internal surface and morbid secretion of the tumour are now sloughing away. Pulse 80, full; bowels regular. Continue as before.

26. She complains to-day of an occasional shooting pain up the thigh; in other respects going on favourably.—Pulse 80, and feebler than yesterday; tongue clean and moist.

28. Has passed an uncomfortable night; owing to the pain in the knee,

which she says is at times very severe;—darting and shooting up the thigh. On removing the poultice, portions of indurated bursal coat were found to be partially detached from the integuments, and by means of scissors they were removed. The constitution is not suffering much; the bowels continue regular; the tongue is clean, and the pulse natural.

30. The parts are now fast separating; the *effluvia* from the wound is very offensive. Continue as before.

December 2. Nearly the whole of the thickened coat of the bursa has now separated, and the size of the tumour is consequently very considerably diminished. The bowels being rather confined, aperient medicine was prescribed for her.

10. Healthy granulations now occupy the centre of the wound, and the fibro-cartilaginous texture of the bursal coat has entirely sloughed away. The wound is slowly diminishing in size, but a large cavity yet remains; the surface, however, looks very healthy, and she appears going on extremely well. The poultices to be discontinued, and to have simple resin dressings applied.

January 12. Since our last report the wound has been gradually lessening, and it is now not larger than a half-crown: the granulating surface being now even with the contiguous skin. In a few days she will be discharged.

Operation of Lithotomy.—Stone or no Stone?

About three weeks since a little boy, 7 years old, was brought into the operating Theatre, for the purpose of having the operation of lithotomy performed on him, by Mr. Lawrence. The child had a few days before been taken to this gentleman's house, and on sounding him there, he said he decidedly felt a stone, and ordered the little sufferer to the Hospital in consequence. The sound being introduced, no stone could be felt, and the operation, was therefore postponed. The child has continued ever since with marked symptoms of stone in the bladder, and in the early part of last week Mr. Stanley succeeded in finding it, although both Mr. Earle and Mr. Lawrence had a few days subsequently made the attempt and failed. From the report of Mr. Stanley, the little boy was again conveyed to the operating Theatre on Saturday: and every thing indicated the "busy note of preparation;" the students were *squeezed* and *crushed* together; the surgeons had posted themselves around, when the sound was again introduced by Mr. Lawrence. All ears were now distorted to catch, if possible, the pleasing annunciation;—no stone, however, could be felt. "No operation after all," murmured a little gentleman in black. "All this squeezing and pushing for nothing," observed a second, "which is a d——n'd *bore*," replied a third. A momentary pause now ensued. "Mr. Vincent," said Mr. Lawrence, "would you like to try;" the veteran surgeon now stepped forward, and after probing about with no little care, *fancied*, (mirabile dictu!) *that he felt something*. Mr. Stanley was next requested to try, and after a few moments had elapsed, he unhesitatingly said he felt it, although a few minutes afterwards he refused to take the responsibility of the case upon himself. Mr. Lawrence attempted again, but with no better success than before. The little fellow was now made to stand up by Mr. Earle, and then sounding him, the long sought for stone was distinctly felt, both by him and Mr. Lawrence. "An operation after all," was whispered around the Theatre, and every countenance depicted an inward mark of satisfaction. The child being secured, the operator cooly seated himself on the chair, took *the knife* and cutting into the bladder—all anxiety was soon at an end, by a little oval shaped stone, about the size of a moderate horse-bean, spurting out of the bladder immediately on introducing the finger. *Query.* Would not this have been a fit case for the use of Weiss's extractor?

Another operation succeeded to this;—that of removing some sequestra from the right tibia of a young man, (by means of Hey's saw,) by Mr. Earle.

ERRATUM.

In a note to page 573 of our present Number, for "calcinum" read *calcium*.